

From DJVelez@aol.com Sun Jan 01 09:25:41 1995
Return-Path: <DJVelez@aol.com>
Received: from mail04.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rOSA7-0000U3C; Sun, 1 Jan 95 09:25 CST
Received: by mail04.mail.aol.com
(1.38.193.5/16.2) id AA13951; Sun, 1 Jan 1995 10:22:35 -0500
Date: Sun, 1 Jan 1995 10:22:35 -0500
From: DJVelez@aol.com
Message-Id: <950101102233_3753590@aol.com>
To: aprssig@tapr.org
Subject: RIGHTIME v2.58a

Has anyone else experienced or resolved a conflict between APRS and RIGHTIME, the continuous DOS and CMOS clock error correction program? It appears RIGHTIME has its fingers EVERYWHERE... I experienced frequent APRS lockups after installing RT and I wondered if anyone can point me to a quick fix before I delete it. (486DX33 WFWG 3.11)

73 de Dan N4WZR

From akasbb1@peabody.sct.ucarb.com Tue Jan 03 08:36:14 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPALI-0000JcC; Tue, 3 Jan 95 08:36 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA09880; Tue, 3 Jan 1995 09:19:20 -0500
Message-Id: <9501031419.AA09880@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Tue, 3 Jan 1995 09:18:30 -0500
To: ablock@nubis.rutgers.edu, dalpert@merle.acns.nwu.edu, daxenos@bu.edu,
"David P. Worrall" <70214.2530@CompuServe.COM>, Emmet2@aol.com,
heyu@aol.com, jan@archimedes.chinalake.navy.mil,
kb2ear@kb2ear.overleaf.com, rbarris@quicksilver.com,
sdimse@umbio.med.miami.edu (Steven S. Dimse), skou@inel.gov,
thayes@hardees.rutgers.edu, tstader@aol.com, wolft@dbisna.com,
wpmichel@srp.gov, ka6eyh@muncey.com, wannamaker@macnet.vpharm.com,
kc6rol@amsat.org, 72170.30@compuserve.com, delta2@infi.net,
castonj@ireq.hydro.qc.ca, lipson@ctobbs.com, rrucker@mitre.org,
rewing@mitre.org, DwainM7367@aol.com,
"Joe Moell" <joemoell@cup.portal.com>, gpotter@collabra.com,
74736.3171@compuserve.com,
Richard H Inacker <inacker@pogo.den.mmc.com>, Sam_Lipson@Berlex.Com,
GregNel123@aol.com, ken@spacetime.mv.com, aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: MacAPRS 1.2.0

MacAPRS 1.2.0 is now up at ftp.ucsd.edu

Currently it is in /hamradio/packet/tcpip/incoming.
However it may get moved to /hamradio/packet/aprs.

In the future, you need to check both places for the most recent version.
The INCOMING directory is where I am allowed to put it, then eventually, it
will get moved to the APRS directory..

New Features...

Statistics Window

=====

Has 'activity' charts. One for the last 24 hours, and one for the last week.
These are BAR GRAPHS of packets-per-time. The 24-hour one shows how many
packets for every 5-minute segment for the last 24 hours. The 1-week chart
shows how many packets for every 1-hour segment for the last week. You can
click on the graph to find out the exact value for any specific time slot.
Or hold down the option key and click to get an overall value. Nice
interface too.

There is a list of buffer sizes, used and maximums too.

This is a good place to find out how many maps are loaded, how many active
stations, how many ALLOWED stations, how big the packet buffers are etc..

Weather Chart Window & Weather Display Window

=====

If you have the Peet Bros Weather Station, there is significant amounts of
weather history data that can now be viewed. The charts are exactly like
the bar-charts described above..

If anybody has the Peet Bros Weather Station, please send me E-Mail..

Automatic Logging

=====

The ability to AUTOMATICALLY start the logging,

In the MacAPRS Settings dialog box are 4 new check boxes.

[] STATION Logging
[] APRS Logging
[] NMEA Logging
[] Weather Logging

If checked, the logging will start automatically on startup of the program

Note. The STATION logging is relatively new. It writes the following
information out to the file named STATIONS.LOG in the LOG folder.

Startup time and version of program.

Call sign and date of every station seen.

A couple of minor bug-fixes.

=====

Keith Sproul	Amateur Radio: WU2Z
Union Carbide Corp	Home Address:
PO Box 670	698 Magnolia Road
Bound Brook, NJ 08805	North Brunswick, NJ 08902-2647
Work: 908 563-5389	akasbb1@peabody.sct.ucarb.com
Fax: 908 563-5035	Packet Radio: wu2z@kb4cyc.nj.usa
Home: 908 821-4828	AppleLink: Sproul.K

From billh@INS.INFONET.NET Wed Jan 04 10:51:04 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPYvN-0000vLC; Wed, 4 Jan 95 10:51 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 5; Wed, 04 Jan 1995 10:52:24 CST
Date: Wed, 04 Jan 1995 10:52:23 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <00989F49.B8B00C4F.5@INS.INFONET.NET>
Subject: UNPROTO usage

I'm not very clear about just how and when and under what radio/TNC configuration the various "RELAY", "GATE" and "WIDE" commands or strings are to be used in the "UNPROTO" statement.

Could someone elaborate on that for me.

I.e. If I want the rest of the world (No ego here Hi Hi) to know where I am and I have only VHF what do I use? etc.

Then if I have a VHF and an HF radio what...? etc.

73

From janderson@ram.net Wed Jan 04 11:14:51 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPZIO-0000ZTC; Wed, 4 Jan 95 11:14 CST
Received: by ram.net (5.65/1.2-eeef)
id AA26544; Wed, 4 Jan 95 12:08:45 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:26] UNPROTO usage
Date: Wed, 04 Jan 95 12:13:26 EST
Message-Id: <02038.15021591@RAMail>
Version: RAMail 2.8h
Location: TYSON'S CORNER (2712) MCLEAN, VA

>I'm not very clear about just how and when and under what radio/TNC configuration the various "RELAY", "GATE" and "WIDE" commands or strings are to be used in the "UNPROTO" statement.
>Could someone elaborate on that for me.

>I.e. If I want the rest of the world (No ego here Hi Hi) to know where
>I am and I have only VHF what do I use? etc.
>Then if I have a VHF and an HF radio what...? etc.
>73

If you have the DOS version, check the file DIGIS.TXT for a good explanation of how the protocol uses the wildcard digipeater aliases. If you have the Mac version there should be a similar description somewhere.

In a nutshell, the wildcard alias WIDE is reserved for wide area digipeaters that are positioned to pick up mobile position packets and relay them to other WIDES. The alias GATE is reserved for HF gateways that run on dual-port TNC's and allows position packets to be bridged from HF to VHF. The alias RELAY is good to use in your UNPROTO if you are mobile and too far from a WIDE to be heard but close enough to a home station that is configured with an alias of RELAY so your packet can get to a WIDE by going through the RELAY.

You should use care in specifying your unproto path. For example, WIDE,RELAY would create a mess as any RELAYS that can hear the WIDE you go through will repeat the packet at the same time causing massive collisions. WIDE,WIDE,WIDE should be avoided too. If you are close to a WIDE, you can try WIDE,WIDE at first, then specify actual callsigns once you get a feel for what is available on the frequency in your area. For example, you can start with WIDE,WIDE then switch to CALLSIGN,WIDE or CALLSIGN,CALLSIGN,WIDE, etc.

Jack
N4ULS@ram.net

From rbeckett@netcom.com Thu Jan 05 07:48:21 1995
Return-Path: <rbeckett@netcom.com>
Received: from netcom.netcom.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPsY5-0000H7C; Thu, 5 Jan 95 07:48 CST
Received: by netcom.netcom.com (8.6.9/Netcom)
id KAA10313; Wed, 4 Jan 1995 10:58:51 -0800
From: rbeckett@netcom.com (Richard G. Beckett)
Message-Id: <199501041858.KAA10313@netcom.netcom.com>
Subject: APRS Mail list
To: aprssig@tapr.org
Date: Wed, 4 Jan 1995 10:58:50 -0800 (PST)
X-Mailer: ELM [version 2.4 PL23]
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Length: 56

Please put me on the APRS mail list.

73 Rich - WB6EEE
From kf5mg@kf5mg.ampr.org Thu Jan 05 12:14:17 1995
Return-Path: <kf5mg@kf5mg.ampr.org>
Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPwhQ-0000aFC; Thu, 5 Jan 95 12:14 CST
Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP

id AA61295 ; Thu, 05 Jan 95 12:13:04 CST
Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP
id AA46360 ; Thu, 05 Jan 95 13:11:45 UTC
Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0)
id AA0476; Thu, 05 Jan 95 12:12:55 -0600
Message-Id: <9501051812.AA0476@mgos2.ampr.org>
Date: Thu, 5 Jan 95 12:09:43 cst
From: kf5mg@kf5mg.ampr.org
To: aprssig@tapr.org
Subject: KISS or BPQ TNC

Anyone know how I can get APRS talking to a KISS mode TNC or a BPQ node? I want to get APRS talking to JNOS via a null modem cable. JNOS can only talk to a KISS mode TNC or perhaps a BPQ switch. APRS seems like it can only talk to a TNC in command mode. Any info would be appreciated.

73's de Jack - kf5mg
Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14
- kf5mg@metronet.com - work (looking for)
PBBSnet - kf5mg@kf5mg.#dfw.tx.usa.noam - home (817) 488-4386
+=====+
+ D.A.M. - Mothers Against Dyslexia +
+=====+

From kf5mg@kf5mg.ampr.org Thu Jan 05 12:18:41 1995
Return-Path: <kf5mg@kf5mg.ampr.org>
Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPwlg-0000WvC; Thu, 5 Jan 95 12:18 CST
Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP
id AA61297 ; Thu, 05 Jan 95 12:15:38 CST
Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP
id AA46362 ; Thu, 05 Jan 95 13:14:25 UTC
Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0)
id AA0478; Thu, 05 Jan 95 12:15:34 -0600
Message-Id: <9501051815.AA0478@mgos2.ampr.org>
Date: Thu, 5 Jan 95 12:13:02 cst
From: kf5mg@kf5mg.ampr.org
To: aprssig@tapr.org
Subject: Windows Based APRS?

I've heard rumors about one or two Windows Based APRS programs. Are these programs available for testing? I'm looking to get APRS running on an OS/2 Machine and have it talk to JNOS on the same machine. In this application... it would be nice if APRS was windows based. Thanks.

73's de Jack - kf5mg
Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14
- kf5mg@metronet.com - work (looking for)
PBBSnet - kf5mg@kf5mg.#dfw.tx.usa.noam - home (817) 488-4386
+=====+
+ D.A.M. - Mothers Against Dyslexia +
+=====+

From bjoseph@industry.org Thu Jan 05 12:48:40 1995
Return-Path: <industry.org!bjoseph@uuhare.rabbit.net>
Received: from uuhare.rabbit.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPxEj-0000tAC; Thu, 5 Jan 95 12:48 CST
Received: from industry.org by uuhare.rabbit.net with uucp
(Smail3.1.28.1 #17) id m0rPxBZ-000IYHC; Thu, 5 Jan 95 13:45 WET
Received: by industry.org (UUPM-1.50)
id D7522SE Thu, Jan 05, 1995 13:44:17 EST
From: bjoseph@industry.org
Message-Id: <9501051344.D7522SE@industry.org>
X-Mailer: UUPlus Mail 1.50
To: APRSSIG@TAPR.ORG
Subject: Query on documentation
Organization: (I)ndustry BBS
Date: Thu, 05 Jan 95 13:44:16 EST

In order to get up to speed quickly, I'd like to obtain printed information on what APRS is.

I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class ham, so I should understand what's going on. Yet, everything I've read on the subject in current ham literature seems exceptionally trivial. Can somebody point me in the right direction?

- - - - -
Bernard W. Joseph, K8LIX Internet: bjoseph@industry.org
(810) 468-5869 AX.25: k8lix@n8eqd.#semi.mi.us.noam
Avoid execrable gender-circumlocutions: use mafe.

SLMR 2.1a
From akasbb1@peabody.sct.ucarb.com Thu Jan 05 12:59:53 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPxPX-0000t1C; Thu, 5 Jan 95 12:59 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA14271; Thu, 5 Jan 1995 14:00:51 -0500
Message-Id: <9501051900.AA14271@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 5 Jan 1995 13:59:04 -0500
To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: Re: [APRSSIG:30] Windows Based APRS?

> I've heard rumors about one or two Windows Based APRS programs. Are
> these programs available for testing? I'm looking to get APRS running
> on an OS/2 Machine and have it talk to JNOS on the same machine. In this
> application... it would be nice if APRS was windows based. Thanks.
>

>73's de Jack - kf5mg
>Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14

There is a MACINTOSH version of APRS called MacAPRS (I wrote it)..
Someone asked a question about porting it to OS/2 here, but there was no
mention of anything being done.

The PC version is written in Quick-Basic...My Macintosh version is written in 'C'.

Keith Sproul

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb4cyc.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From akasbb1@peabody.sct.ucarb.com Thu Jan 05 12:59:58 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPxPe-0000vLC; Thu, 5 Jan 95 12:59 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA14273; Thu, 5 Jan 1995 14:00:54 -0500
Message-Id: <9501051900.AA14273@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 5 Jan 1995 13:59:09 -0500
To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: Re: [APRSSIG:29] KISS or BPQ TNC

> Anyone know how I can get APRS talking to a KISS mode TNC or a BPQ
>node? I want to get APRS talking to JNOS via a null modem cable. JNOS can
>only talk to a KISS mode TNC or perhaps a BPQ switch. APRS seems like it
>can only talk to a TNC in command mode. Any info would be appreciated.
>
>73's de Jack - kf5mg
>Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14

APRS only talks to NORMAL TNCs (TAPR-2 based) that have a MONITOR mode. In
KISS mode you do not get the data in the same formats and therefore it
doesn't work..

It might be able to be made to work, but that would had another level of
complexity to the parsing of the data...

Keith Sproul

```
-----
Keith Sproul                |Amateur Radio:   WU2Z
698 Magnolia Road          |Internet:        akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647 |Packet Radio:   wu2z@kb4cyc.nj.usa
Work: 908 563-5389         |AppleLink:      Sproul.K
Fax: 908 563-5035         |Chairman ACG-NJ Mac Users Group
Home: 908 821-4828         |Author of MacAPRS
-----
```

From kf5mg@kf5mg.ampr.org Thu Jan 05 13:30:26 1995

Return-Path: <kf5mg@kf5mg.ampr.org>

Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPxt7-0000WvC; Thu, 5 Jan 95 13:30 CST

Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP
id AA61315 ; Thu, 05 Jan 95 13:29:30 CST

Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP
id AA46410 ; Thu, 05 Jan 95 14:28:18 UTC

Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0)
id AA0514; Thu, 05 Jan 95 13:29:28 -0600

Message-Id: <9501051929.AA0514@mgos2.ampr.org>

Date: Thu, 5 Jan 95 13:28:16 cst

From: kf5mg@kf5mg.ampr.org

To: aprssig@tapr.org

Subject: [APRSSIG:32] Re: Windows Based APRS?

```
> There is a MACINTOSH version of APRS called MacAPRS (I wrote it)..
> Someone asked a question about porting it to OS/2 here, but there was no
> mention of anything being done.
>
>
> The PC version is written in Quick-Basic...My Macintosh version is written in 'C'.
>
> Keith Sproul
```

Is the source for either of these version available. I'd like to take a stab at doing an OS/2 version, but I don't want to have to start from scratch.

```
73's de Jack - kf5mg
Internet      - kf5mg@kf5mg.ampr.org - 44.28.0.14
              - kf5mg@metronet.com   - work (looking for)
PBBSnet       - kf5mg@kf5mg.#dfw.tx.usa.noam - home (817) 488-4386
```

```
+=====+
+                D.A.M. - Mothers Against Dyslexia                +
+=====+
```

From dkelly@nebula.tbe.com Thu Jan 05 13:31:46 1995

Return-Path: <dkelly@nebula.tbe.com>

Received: from nebula.tbe.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPxuN-0000B4C; Thu, 5 Jan 95 13:31 CST

Received: by nebula.tbe.com (5.57/Ultrix3.0-C)
id AA18777; Thu, 5 Jan 95 13:34:17 -0600
Date: Thu, 5 Jan 95 13:34:17 -0600
From: dkelly@nebula.tbe.com (david kelly)
Message-Id: <9501051934.AA18777@nebula.tbe.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:31] Query on documentation

> In order to get up to speed quickly, I'd like to obtain printed
> information on what APRS is.
>
> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
> ham, so I should understand what's going on. Yet, everything I've read
> on the subject in current ham literature seems exceptionally trivial.
> Can somebody point me in the right direction?
>
> - - - - -
> Bernard W. Joseph, K8LIX Internet: bjooseph@industry.org

You've hit the nail on the head Bernard, "...seems exceptionally trivial."
APRS seems exceptionally trivial. I subscribed to this list to be
enlightened but so far I'm underwhelmed.

Of course with a message like this I'm sure to be flamed. Please share
non-trivial flames with the list so we'll all be enlightened.

73, David N4HHE
dkelly@nebula.tbe.com
From kf5mg@kf5mg.ampr.org Thu Jan 05 13:38:58 1995
Return-Path: <kf5mg@kf5mg.ampr.org>
Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPy1M-0000x9C; Thu, 5 Jan 95 13:38 CST
Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP
id AA61317 ; Thu, 05 Jan 95 13:37:41 CST
Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP
id AA46412 ; Thu, 05 Jan 95 14:35:48 UTC
Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0)
id AA0515; Thu, 05 Jan 95 13:36:57 -0600
Message-Id: <9501051936.AA0515@mgos2.ampr.org>
Date: Thu, 5 Jan 95 13:29:52 cst
From: kf5mg@kf5mg.ampr.org
To: aprssig@tapr.org
Subject: [APRSSIG:33] Re: KISS or BPQ TNC

> APRS only talks to NORMAL TNCs (TAPR-2 based) that have a MONITOR mode. In
> KISS mode you do not get the data in the same formats and therefore it
> doesn't work..

Yep. That's what I've figured out so far.

> It might be able to be made to work, but that would have another level of
> complexity to the parsing of the data...
> Keith Sproul

Your right... it would add complexity but it would also add flexibility. Currently my JNOS Box has 4 radios/tncs attached to it. It's running in an OS/2 Doh box. One of the radios gives me a 9600b link to an Internet Gateway. If I could have JNOS talk to the APRS program via KISS and a NULL Modem cable, besides feeding data heard from the 4 radio ports to aprs I could also feed it info taken from other APRS systems connected via the gateway. I could let my TCP/IP system run, and then switch over to a OS/2 DOS Box running APRS (or a windows version) and see who's active locally... zoom out and see who's active in Texas... zoom further out...etc. Limiting me (and everyone else) to a dedicated TNC and radio would put a damper on my idea.

```
73's de Jack - kf5mg
Internet      - kf5mg@kf5mg.ampr.org          - 44.28.0.14
              - kf5mg@metronet.com           - work (looking for)
PBBSnet      - kf5mg@kf5mg.#dfw.tx.usa.noam   - home (817) 488-4386
+=====+
+                D.A.M. - Mothers Against Dyslexia                +
+=====+
```

```
From kf5mg@kf5mg.ampr.org Thu Jan 05 13:42:02 1995
Return-Path: <kf5mg@kf5mg.ampr.org>
Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp
        (Smail3.1.29.1 #5) id m0rPy4L-0000aRC; Thu, 5 Jan 95 13:41 CST
Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP
        id AA61319 ; Thu, 05 Jan 95 13:40:56 CST
Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP
        id AA46414 ; Thu, 05 Jan 95 14:39:16 UTC
Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0)
        id AA0516; Thu, 05 Jan 95 13:40:26 -0600
Message-Id: <9501051940.AA0516@mgos2.ampr.org>
Date: Thu, 5 Jan 95 13:37:06 cst
From: kf5mg@kf5mg.ampr.org
To: aprssig@tapr.org
Subject: WX Data
```

When APRS received WX data... how is it displayed? I've been playing with a temperature IC that lets me determine the outdoor temp using my PC. I can broadcast this info in a UI frame using JNOS. If an APRS box receives this info (assuming that it's formatted correctly.) how will it be displayed?

Also... if I just have the Temp. data... do I have to specify 000 for wind speed and direction?

Thanks.

```
73's de Jack - kf5mg
Internet      - kf5mg@kf5mg.ampr.org          - 44.28.0.14
              - kf5mg@metronet.com           - work (looking for)
PBBSnet      - kf5mg@kf5mg.#dfw.tx.usa.noam   - home (817) 488-4386
+=====+
+                D.A.M. - Mothers Against Dyslexia                +
+=====+
```

+=====+

From akasbb1@peabody.sct.ucarb.com Thu Jan 05 14:28:33 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPynI-0000kpC; Thu, 5 Jan 95 14:28 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA09937; Thu, 5 Jan 1995 15:29:24 -0500
Message-Id: <9501052029.AA09937@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 5 Jan 1995 15:27:39 -0500
To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: Re: [APRSSIG:37] WX Data

> When APRS received WX data... how is it displayed? I've been playing
>with a temperature IC that lets me determine the outdoor temp using my
>PC. I can broadcast this info in a UI frame using JNOS. If an APRS box
>receives this info (assuming that it's formatted correctly.) how will
>it be displayed?
> Also... if I just have the Temp. data... do I have to specify 000
>for wind speed and direction?
>
> Thanks.
>
>73's de Jack - kf5mg
>Internet - kf5mg@kf5mg.ampr.org - 44.28.0.14

I will get you the exact format so that you can do this..

It would include your lat/lon, station type of Weather which is the
underscore charcter, and then the weather data, yes, unknown data would be
put in as zeros..

Keith Sproul

Keith Sproul	Amateur Radio: WU2Z
Union Carbide Corp	Home Address:
PO Box 670	698 Magnolia Road
Bound Brook, NJ 08805	North Brunswick, NJ 08902-2647
Work: 908 563-5389	akasbb1@peabody.sct.ucarb.com
Fax: 908 563-5035	Packet Radio: wu2z@kb4cyc.nj.usa
Home: 908 821-4828	AppleLink: Sproul.K

From akasbb1@peabody.sct.ucarb.com Thu Jan 05 14:28:43 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPynS-000181C; Thu, 5 Jan 95 14:28 CST

Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA09939; Thu, 5 Jan 1995 15:29:30 -0500
Message-Id: <9501052029.AA09939@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 5 Jan 1995 15:27:50 -0500
To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: Re: [APRSSIG:35] Re: Query on documentation

>> In order to get up to speed quickly, I'd like to obtain printed
>> information on what APRS is.
>>
>> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
>> ham, so I should understand what's going on. Yet, everything I've read
>> on the subject in current ham literature seems exceptionally trivial.
>> Can somebody point me in the right direction?
>>
>> - - - - -
>> Bernard W. Joseph, K8LIX Internet: bjooseph@industry.org
>
>You've hit the nail on the head Bernard, "...seems exceptionally trivial."
>APRS seems exceptionally trivial. I subscribed to this list to be
>enlightened but so far I'm underwhelmed.
>
>Of course with a message like this I'm sure to be flamed. Please share
>non-trivial flames with the list so we'll all be enlightened.
>
>73, David N4HHE
>dkelly@nebula.tbe.com

I see no reason to flame you.. Your comments are at least somewhat accurate.. I have known people that were able to get the PC version up and running with very little trouble without reading much documentation and people that had to struggle with it..

The Mac version is somewhat easier to get up and running, but it too has some things that are not as clear as they should be....

There are MANY different aspects to APRS, and some of them are fairly well written up in Bob's (WB4APR) documentation and some of them are not. I too have a problem of incomplete documentation and have been working on this problem.

Both Bob and I keep getting requests for MORE AND MORE features, and have not had as much time to get back to writing the documentation as we would like. A lot of Bob's documentation as simply 'evolved' over time...

Keith Sproul, WU2Z, Author of MacAPRS

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb4cyc.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From janderson@ram.net Thu Jan 05 14:30:35 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPypH-0000kpC; Thu, 5 Jan 95 14:30 CST
Received: by ram.net (5.65/1.2-eeef)
id AA09536; Thu, 5 Jan 95 15:24:24 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:35] Re: Query on documentation
Date: Thu, 05 Jan 95 15:29:03 EST
Message-Id: <02045.15021591@RAMail>
Version: RAMail 2.8h
Location: TYSON'S CORNER (2712) MCLEAN, VA

>> In order to get up to speed quickly, I'd like to obtain printed
>> information on what APRS is.
>>
>> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
>> ham, so I should understand what's going on. Yet, everything I've read
>> on the subject in current ham literature seems exceptionally trivial.
>> Can somebody point me in the right direction?
>>
>> - - - - -
>> Bernard W. Joseph, K8LIX Internet: bjoseph@industry.org
>
>You've hit the nail on the head Bernard, "...seems exceptionally trivial."
>APRS seems exceptionally trivial. I subscribed to this list to be
>enlightened but so far I'm underwhelmed.
>
>Of course with a message like this I'm sure to be flamed. Please share
>non-trivial flames with the list so we'll all be enlightened.
>
>73, David N4HHE
>dkelly@nebula.tbe.com

You really have to try it to see what it's all about. It helps if there is established APRS activity in your area already. The first time I used it there was little activity and active digipeaters. That was almost two years ago, and I put it away after a few days of experimentation.

About a month ago I downloaded the latest version and fired it up again. Now I see stations all up and down the east coast (I'm in the DC area) that come in on 2m alone. There is a network of digipeaters that allow me to see position reports from as far north as New York City. It is a neat system and it has a lot of applications in some of the public service activities hams participate in, such as marathons, weather spotting, etc.

Part of its beauty is its simplicity. This may make it seem trivial at first, but after you see what it can do you might feel different about it.

Jack

N4ULS@ram.net

From janderson@ram.net Thu Jan 05 14:33:03 1995

Return-Path: <janderson@ram.net>

Received: from ram.net by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rPyrj-00019bC; Thu, 5 Jan 95 14:32 CST

Received: by ram.net (5.65/1.2-eeef)

id AA09554; Thu, 5 Jan 95 15:26:26 -0500

From: janderson@ram.net

To: aprssig@tapr.org

Subject: Re: [APRSSIG:31] Query on documentation

Date: Thu, 05 Jan 95 15:31:24 EST

Message-Id: <02047.15021591@RAMail>

Version: RAMail 2.8h

Location: TYSON'S CORNER (2712) MCLEAN, VA

>In order to get up to speed quickly, I'd like to obtain printed
>information on what APRS is.

I'll send two .TXT files to the list from the DOS version that pretty much explain what it is and what it does.

73

Jack

N4ULS@ram.net

From janderson@ram.net Thu Jan 05 14:38:45 1995

Return-Path: <janderson@ram.net>

Received: from ram.net by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rPyw7-0001AcC; Thu, 5 Jan 95 14:37 CST

Received: by ram.net (5.65/1.2-eeef)

id AA09592; Thu, 5 Jan 95 15:31:20 -0500

From: janderson@ram.net

To: aprssig@tapr.org

Subject: Re: [APRSSIG:31] Query on documentation

Date: Thu, 05 Jan 95 15:32:12 EST

Message-Id: <02048.15021591@RAMail>

Version: RAMail 2.8h

Location: TYSON'S CORNER (2712) MCLEAN, VA

APRS is the result of my experience over the last 14 years with trying to use packet radio for real-time communications or public service events. Packet radio has great potential but so far has been best used for passing large volumes of message traffic from point to point or into the national distribution system. It has been difficult to apply packet to real time events where information has a very short life time. Typically, several steps are involved in preparing and passing message traffic including decisions about routing and connectivity.

APRS avoids the complexity and limitations of trying to maintain a connected network. It permits any number of stations to participate and exchanges data just like voice users would on a single voice net. Any station that has information to contribute simply transmits it, and all stations receive it and log it. Secondly, APRS recognizes that one of the greatest real-time needs at any special event or emergency is the tracking of key assets. Where is the Event Leader? Where are the emergency vehicles? Where's the fire? What's the Weather at various points in the County? Where are the power lines down? Where is the flood? Where is the head of the parade? Where are the VIP's? Where is the mobile ATV camera? Where are the mobiles? Where is the hurricane? WHERE IS THE DX???

Included on the distribution disk are several README text files on specific applications of APRS such as for weather nets, direction finding, plotting satellite contacts, and monitoring DX clusters. You must read at least the HELP.txt, DEMOS.txt, NewNotes.txt and README.1st files. APRS accomplishes the real-time display of operational traffic via UI frame broadcasts and map displays. There are three major display subsystems and a number of other minor displays as follows:

LATEST BEACONS - This display maintains a list of the latest UI frame received from each station. In effect, this is a multi-station one-line broadcast message system. Since the lines contain the LATEST time of receipt, this display shows if a station is still on line within the last few minutes. In DX cluster mode, it accumulates a list of all users and what was their latest command to the cluster.

POSITIONS - This display maintains a separate list of the positions of each station. Each position report can also contain a brief comment. These lines show the latest time of receiving a given position report and give an indication of the latency in the network over unreliable paths such as HF. They also contain Beam Heading for Direction Finding, and Weather conditions for weather reporting stations. In DX mode, this list also contains the posits of all DX spots and user-locations heard.

MAPS - Maps to any scale from .5 miles up to 2000 miles can be displayed. Stations are instantly displayed when they transmit a properly formatted position beacon. Stations with a reported course and speed are automatically dead-reckoned to their present position. A complete database of all the National Weather Service stations is built in. You can center the map anywhere in the world. In DX mode the map defaults to the whole world.

TRAFFIC - In addition to the BEACON text which is used to broadcast information to all other stations on the net, there is an operator-to-operator

message capability. Any station can send one line messages to any other station. On receipt, the messages are acknowledged and displayed on the bottom of the receiving stations screen until the operator hits the K key to kill them. These messages are ideal for station-to-station comms while remaining within the APRS environment. However, they are not as effecient as the connected protocol, and should not be used routinely for Rag-Chewing on a busy APRS net. To rapidly exchange text, select the COMM option under the OPS menu and use your TNC to connect to the guy.

BULLETINS - This screen is new in version 5.06. It provides the much needed BULLETIN Broadcast capability to keep all stations up to date on happenings and announcements. BULLETINS allow one station to send multiple lines to the BULLETIN page at ALL stations. It is simply a variant of the SEND command noted above, but the send address is BLN# where # is the line number of the BULLETIN line. On receipt, all stations sort the new BLN# lines onto the BULLETIN page so that corrections are replacements are possible.

READ MAIL - This screen shows the last 23 lines of messages exchanged by any stations on the net. Is useful for "READING THE MAIL". DX mode TALK traffic also shows up here.

ALL TRAFFIC LOG - This display is a time sequenced log of every new beacon or one line message sent. Beacons are logged the first time they are received. This is in contrast to the LATEST display which shows the most recent time of receipt of a beacon text. In DX mode, this screen shows a chronological list of all DX/WX/WWV and ANNOUNCEMENTS heard.

HEARD LOG - This display maintains a count of the total number of transmissions from each station per hour. These statistics are ideal for displaying the connectivity of the network over varying paths, such as HF, or to see when stations enter and leave the net.

DIGIPEATER LIST - This display displays the full raw packet header so that APRS users can see what digipeater paths are being used by other stations. The proper use of digipeaters is important in an APRS network. In DX mode, this list accumulates a list of all ACTIVE MESSAGES on the DX cluster.

STATION TRACKING. Although APRS automatically tracks mobile packet stations interfaced to GPS or LORAN navigation, the graphic capability of the maps works perfectly well with manual tracking or with GridSquares. Any station on HF or VHF that includes his GridSquare in brackets as the first text in his beacon text will be plotted by APRS. Additionally, any station can place an object on his map including himself and within seconds that object appears on all other station displays. In the example of a parade, as each checkpoint with packet comes on line, its position is instantly displayed to all in the net. Whenever a station moves, he just updates his position on his map and that movement is transmitted to all other stations. To track other event assets, only one packet operator needs to monitor voice traffic to hear where things are. As he maintains the positions and movements of all assets on his screen, all other displays running APRS software display the same displays. With

version 3.04, there is a Tracking command on the P display that will cause APRS to keep the map display always centered on a selected object.

GRID SQUARES: APRS also plots stations by gridsquares. Because of the ambiguity of a grid-square position report, APRS will not display a four digit or six digit gridsquare report on map ranges less than 128 and 8 miles respectively. Stations reported in the same grid square are randomly offset from the center of the grid according to an algorithm based on the letters of their callsigns. This prevents the cluttering of all callsigns on top of each other in the same grid square. The resulting computed POSIT in the POSITION list is annotated to indicate that the position is approximate. Another advantage of GridSquare reporting in APRS is that it allows cautious people to participate in APRS without revealing their exact location. It is also very brief. Six characters vice seventeen. There is a special ALT-G mode to force your outgoing posit to be sent in GRID SQUARE format vice LAT/LONG. Shortening the packet is an advantage when reporting via MIR or SAREX.

USING DUMB TERMINALS IN AN APRS NETWORK: The simplicity and usefulness of this geographic capability cannot be over stressed. Stations running APRS simply move the cursor to where they think they are on the screen and their LAT/LONG coordinates are automatically transmitted to all other stations. Even the simplest of portable packet stations with dumb terminals can report their positions if they can reasonably interpolate their position on a map. The portable station just looks at the map and enters his LAT/LONG into his beacon text. APRS also plots station positions based on Grid Squares. Eventually, we hope that all stations, no matter how they are using their TNC, will include their LAT/LONG or Grid Square in their Beacon Text so that their location is immediately available. See the PROTOCOL.txt file for details on APRS formats and help in using dumb terminals in an APRS network.

FREQUENCY COORDINATION: APRS makes an excellent mapping tool for frequency coordination. Separate APRS backup files can be maintained for each digital frequency. These files can be distributed via BBS's in the area, and stations can simply load these files into APRS and see where ALL stations are on all frequencies! Not only does this help the frequency coordinating body, but it also is a way to let users see what is where. See FRQCOORD.txt

SPACE APPLICATIONS: APRS could be a solution to the effective use of orbiting terrestrial style packet radio digipeaters in space such as on the Shuttle, MIR, AO-21 and ARSENE. The problem with space digipeaters is the saturation on the uplink channel which makes the use of a normal CONNECTED protocol impractical. For a CONNECTED contact, a total of five successive and successful packet transmissions are required. Not only does APRS reduce this to one packet, but it also capitalizes on the most fascinating aspect of the amateur radio hobby, and that is the display on a map of the location of those stations. If all stations were encouraged to simply insert their LAT/LONG or Grid Square as the first characters of their beacon text, everyone within the satellite footprint would see the location of every successful uplink. Since the shuttle is a rapidly moving object, the locations of successful uplink stations will move progressively along the ground track. All it would take to implement this capability is a single AMSAT news bulletin to ask all stations to insert their

POSITS in their beacon text. No changes onboard the shuttle or MIR would be required. See SPACE.txt for further details.

FOX HUNTING OR DIRECTION FINDING: APRS is an excellent tool for plotting the location of a hidden transmitter, balloon, or interfering signal. APRS will display the intersection of bearing lines from a number of reporting stations and also overlapping signal strength contours if only signal strengths are reported. Finally, APRS includes the Fade-Circle Search and Rescue technique which can be used by a mobile with only an OMNI antenna to locate a hidden transmitter.

To use APRS for DFing, each station having a bearing report or a signal strength on the target, simply enters that bearing using the OPS-DF command. His station will then not only report his location, but also a line of bearing or signal strength contour. All stations running APRS can simply hit the X key to display the intersection of these bearing lines. Further, if a DF vehicle has a GPS or LORAN device on board, he can be tracked and directed right to the location of the target. There is an optional Doppler DF registration for direct connection of a Roanoke or Doppler Systems DF unit for automatically plotting and transmitting instantaneous DF bearings. Please note that APRS uses 360 degrees for North and 0 to indicate a signal strength report. For more DF info, see the DF.txt file.

WEATHER STATION REPORTING: APRS position reports can also include the wind speed and direction, as well as other important weather conditions. APRS supports a serial interface option to the ULTIMETER-II home weather station. With this interface, your station includes WX conditions in your position report for display at all other stations in the network. All weather stations show up as a bright blue circle, with a line indicating wind speed and direction. Remember that APRS uses 360 degrees for North and uses 000 to indicate that no wind direction is available. Each of these stations can be highlighted in turn with a single key stroke, so that all WX reports across the state can be had at a glance. See WX.txt for more information. APRS also has a database of the locations of all the NWS sites in the USA for instant display. APRS can also crunch a file of NWS hourly WX conditions and update all NWS stations on the map. NEW in version 6.2, APRS can set Alarms for WX conditions and any WX reports that exceed those values will send an alarm and show up in RED!

DX CLUSTERS: The positional display and real-time user communications makes APRS an ideal tool for the DX cluster user. Not only does he get to see all DX spots on the map, but by operating in the monitor only mode, he has reduced the overall packet load on the DX cluster. This is a benefit to everyone on the channel. Also the APRS monitoring station will see the SPOT as soon as the first station gets it, rather than later on down the list.

PROTOCOL - Since the objective of APRS is the rapid dissemination of real-time information using packet UI frames, a fundamental precept is that old information is less important than new information. All beacons, position reports, messages and display graphics are redundantly transmitted but at a longer and longer repetition rate. Each new beacon is transmitted immediately, then 20 seconds later. After every transmission, the period is doubled. After

ten minutes only six packets have been transmitted. After an hour this results in only 3 more beacons; and only 3 more for the rest of the day! All transmissions can be turned off using one of the CONTROLS commands. But a transmission can be forced at any time by hitting the X key. For details on the APRS raw packet formats see the PROTOCOL.txt file. The maximum period can be set so that packets are repeated no less often than some maximum period. See CAP.txt.

COMMANDS: In most cases the keyboard is always active. There is a mnemonic relationship between all functions and the appropriate key. For this reason, the PC function keys are avoided. (APRS processing of packets on the air is continuous EXCEPT while waiting for the user response to a prompt. These prompts are surrounded with a blue box). Commands fall in to 3 categories:

SCREENS:

Space Key	- Display map and all station locations
L - Latest beacons	- Displays the latest STATUS BEACON from each station
P - Positions	- Displays a list of all stations reporting positions
A - ALL packet log	- Keeps a chronological log of all beacons and messages
B - BULLETINS	- Keeps a list of all BULLETINS heard
R - Read Mail	- Displays the last 23 lines of messages between stns
D - Digis Used	- Displays the digipeater paths being used by others
H - Heard Log	- Displays packets per hour per station for 24 hours
V - VIEW	- Displays all packets on a scrolling screen

SUB-MENUS:

F1- Help	- Select from a MENU of HELP commands
C - Controls	- Display a one line status of all control states
F - FILES Menu	- For Loading/Saving files, or Replaying tracks
I - Input commands	- Used to input posits, DF info or add OBJECTs to map
O - OPERATIONS	- Several commands for normal operations
M - MAP Functions	- Functions dealing with maps
W - Weather Menu	- Displays the number of beacons per hour per station

TRAFFIC:

T - Traffic	- Displays your incoming and outgoing traffic
S - Send	- Sends traffic to a station
E - Erase	- Erases outgoing traffic lines
K - Kill	- Kills incoming traffic lines

DEMONSTRATION FILE: To see how the APRS system works on our frequency, use FILES-LOAD to load the file called FREQ579.BK. This file contains all the local stations on 145.79 MHz in our area. To see the tracking of the GPS equipped Army/Navy game football run, load the file named FBALL.BK and replay the file named FBALL.HST and select to see only FBALL, or CHASE1. To see the Marine Corps marathon event, load MARATHON.BK and replay the MARATHON.HST file. See Details in README.1st.

HOOKING STATIONS: The yellow circular cursor can be moved to select any station in the system using the arrow keys. On the MAP display move the cursor near any station symbol. Then hit the RETURN key to "hook" the station. Detail information on that station will be displayed at the bottom of the screen. Alternatively, use the + and - keys to step through each station one by one. You may also use the cursor on the P or L-list to hook a station or object. Once hooked, several functions may be performed:

1. ALL BEACONS - hitting the A key will list all beacons from that station currently in memory.
2. MOVE - performed by moving the cursor to the desired new location and pressing the Insert key. You are then prompted to enter in a new course, speed, comments or time as needed.
3. DELETE - performed by hitting the D key. Removes the station from the position file.
4. UPLINK - transmit the object to all other stations on the net
5. QUIT - quit uplinking the object to the net.
6. KILL - kill the object from all displays in the network
7. ALARM - you can set an alarm on a station which will alert you if that station ever moves its position.
8. TRACK - will cause APRS to always center display on selected station
9. #MARK - By marking a station with the # symbol, only that station will be shown when # is used instead of SPACE BAR for drawing a map. If the * key is pressed, all symbols will be shown on the map, but only the marked symbols (#) will show callsigns.

The hook function also works on the LATEST and POSITION display lists by using the up/down arrow keys. If a position exists, hitting the SHOW key will display the map screen with that station centered on the display. This is useful for finding a station which is far off the currently displayed map range. If a position does not exist, you are given the opportunity to create one.

REPLAY: Since all beacons and position reports are retained, the positions of any moving station can be replayed either from memory or from a file. Tracks are kept in on-line memory until 150 have been saved, and then are saved to a HISTORY file. During REPLAY, use the C command to toggle on and off the display of callsigns, and use the HOME and page keys to center and zoom the map display if the mobile station moves off the screen. During replay, use these single key commands:

- C - CALLsigns on/off
- HOME - Homes map to presently displayed station

SPACE- Redraws the present map to remove track clutter
F - Faster. Speeds up playback
G - Overlays the Civil Air Patrol Search and Rescue grids
P - Pause
S - Slow. Slows down playback
Q - Quit playback.
PgUp/PgDn - Zoom in and out

FILES: All APRS files are retained in four different sub-directories of
BAKS, LOGS, HSTS, and README. There are several other files used
by the system:

MAPLIST .map - Contains a list of all map files to be used and also the
default LAT/LONG, Range and GMT offset for your location
BACKUP .BK - Automatic backup of system every time program is quit. This
file is overwritten every time the program is quit. It can
be reloaded by simply indicating the letter B for a filename.
RESTORE.TNC - A list of the TNC commands used to restore your TNC after
quitting APRS.
NWSDATA.DAT - A sample file used to load National Weather Service data
NWSPOSNS.DAT - A file of the locations of all NWS sites
CAPGRIDS.DAT - A file of the Civil Air Patrol Sectional Aeronautical charts
DXCALLS.DAT - Callsign prefix-to-LAT/LONG database for DX spots
MAPFIX.BAS - A very comprehensive Qbasic program that can be used to fix,
draw, and modify APRS maps!

CHESSBOARD: To demonstrate the flexibility of APRS in reporting the movement
of objects on screens in a net, I have drawn a chessboard map in the center
of the Gulf of Mexico. Any two stations can play chess easily using APRS by
placing pieces on the map using the INPUT-ADD command and updating their
positions using the cursor and INSert keys! The full 32 pieces are already
loaded and saved in CHESS.BK. To move a piece, first enable it for uplinking
using the U key on the P-list. Then move the cursor and hit the INSert key.
Once the other station sees your move, and makes his next move, it is a good
idea to Quit the uplinking of that piece using the Q key on the P-list to
minimize channel traffic. Monitoring stations that have also zoomed into the
chessboard will see the game progress too!

From janderson@ram.net Thu Jan 05 14:44:29 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rPyz0-00019wC; Thu, 5 Jan 95 14:40 CST
Received: by ram.net (5.65/1.2-eef)
id AA09629; Thu, 5 Jan 95 15:34:46 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:31] Query on documentation
Date: Thu, 05 Jan 95 15:33:22 EST
Message-Id: <02049.15021591@RAMail>
Version: RAMail 2.8h
Location: TYSON'S CORNER (2712) MCLEAN, VA

SUMMARY: APRS can be summed up with two concepts, REAL-TIME PACKET TACTICAL COMMUNICATIONS and MAPS. Probably 98 % of APRS potential does not need GPS or any tracking devices. Think of APRS as just a multi-user distributed packet network with a MAP display for many exciting amateur applications:

Network topology monitoring	Direction Finding
weather reporting	DX cluster monitoring
AMSAT ground station tracker	Satellite tracker (future)
boat/mobile/RV tracker	Special event tracker/organizer
Local area CHAT mode	HF DX plotter
RF path estimating	Search and Rescue
Frequency Coordination database	

To support the obvious Automatic Vehicle Location application it is important that all mobile operations should be on the single 145.79, 445.925, and 10.1515 LSB national vehicle tracking frequencies. Mobile's wander across political boundaries and single frequency XTAL controlled GPS trackers are common. See UHFFREQ.txt

Aside from these standard APRS frequencies for vehicle tracking and SKYwarn applications, there is no reason why APRS cannot be used as a monitoring tool on any frequency. If all NODES, BBS's, DIGI's and other full time packet stations simply included their position in their beacons, then any APRS user could see a network map of all assets on any frequency. This is an excellent Frequency Coordination tool! Each night when you secure, leave your APRS system on a different digital frequency and see who you pick up!

DEMONSTRATIONS: To get familiar with APRS, there are two important commands for seeing past events. First, you can load from a selection of BACKUP files a snapshot of previous events. These files are loaded using the FILES-LOAD command and reload all the APRS pages at the time the file was saved. Nothing moves, but you can see all the APRS screens that show the position, status, and latest packet from each station. The more powerful demonstration tool of APRS is the FILE-REPLAY feature which lets you replay the track history file of a previous event. All position reports are replayed to see station movements on the map. Many major APRS events are included on the distro disk. You should replay them all and use the PgUP/DN keys and HOME key to zoom in or out as the file is replayed.

DOCUMENTATION: Since APRS is a generalized packet tool with application in almost all facets of amateur radio, it is hard to write a simple description. For this reason all of the documentation so far is separated into numerous .TXT files, each focused on a particular subject. These files can be read ON-LINE using the F1(HELP)-FILES command. All of these files are in the README subdirectory:

FILENAME	DESCRIPTION
-----	-----
README.1st	This file
README.now	Tells you how to unzip the APRS distribution disk
NEWNOTES.txt	Tells of important changes in the latest versions

ALLABOUT.IT General description and overview of APRS
 AIRCRAFT.txt Using APRS from Aircraft and how to interface to ARNAV format
 BBSNOTES.txt Suggestions to BBS SYSOPS on how to use APRS
 CDRON.txt Using MAPFIX.bas to generate maps from \$32 USGS CD ROMs
 COMMERCIAL.txt COMMERCIAL APRS to interface with other DELORME/STREETS prgms
 DF.txt Information on DFing and AUTOMATIC Doppler interfaces!
 DEMOS.txt A quick summary of demonstrations and replays to impress you.
 DIGIS.txt Important info on using Digipeaters
 DIGITIZR.txt Using DIGITIZERS to draw your own maps with MAPFIX.bas prgm!
 PROTOCOL.txt Info on APRS formats for setting up TNC BTexts
 DX.txt Info on using APRS to plot DX spots on a DX cluster frequency
 GPS.txt Interfacing GPS or LORAN to APRS or stand-alone TNC's
 HF.txt Notes on the APRS HF tracking network
 HELP.txt Describes each of the APRS commands in detail
 MAPS.txt Detailed information on how to build your own maps
 MARATHON.txt Lessons learned at the Marine Corps Marathon
 MOBILE.txt Notes on Mobile operations with GPS
 OPS.txt Suggestions on routine APRS operations
 SCREEN.txt Describes the APRS screen and display areas
 SPACE.txt Suggested use of APRS for plotting satellite packet stations
 SYMBOLS.txt A table of APRS symbols and the symbol designators
 WX.txt Info on using APRS for displaying weather information
 BOATS.txt Suggested use of APRS to support the WaterWay Net

 IDEAS.txt A file of other neat APRS ideas to encourage others to write
 supporting TNC and forwarding code. Programmers READ IT!

SETUP: You should customize APRS to automatically come up centered on your favorite map screen by zooming the map to your center of activity. Either your home, or a WIDE area APRS digipeater. Next set your desired digipeater path using the UNPROTO command. (To understand the UNPROTO concept, refer to your TNC manual). Finally, use the ALT-SETUP menu to SAVE your config file. You will be prompted for your validation number and then asked for a CONFIG file extension. Normally just select the default of APRS unless you want to be able to invoke several different CONFIG files... Once you have saved a config file, APRS will always come up ready to go on your area.

Once you have zoomed into your neighborhood, non-registered users can use the FILE-SAVE command to SAVE a backup file of their current situation. When they start up APRS, after logging on, they simply use FILE-LOAD to LOAD that backup file to bring up the neighborhood map. Then they move the cursor and place themselves on the map in the right place. Europeans, or non US hams may want to change the default map from the initial USA map, to something closer to home. The initial map is determined by the default LAT/LONG and RANGE given in the first three lines of the MAPLIST.APR file. Without a config file, APRS always starts up at this location and scale. Obviously the locataion in Kansas was chosen so that the whole US came up first. As of version 5.9, you can have many different MAPLIST.xxx files.

MAPS! - To see my best maps so far, zoom into Idaho Falls at 43 30N and 112 02W to the 1 mile range, or either Baltimore or NewOrleans to the 4 mile

scale. By now (June 94) there are large area maps for most of the USA that will get you down to the 32 or 64 mile VHF range in your area. You can make your own maps from the directions in MAPS.txt using a variety of different techniques. You can get a \$32 USGS CD rom that covers your area and use it to develop APRS maps all the way down to the street level. See CDRom.txt. In any case, dedication and effort are involved, but having a local street map that can be freely distributed to all the amateur community, is worth it. In some cases, I may be persuaded to do custom maps for anywhere from \$90 to \$195 depending on complexity and my wife's honey-do list. It is really quite simple to draw a map from any source. Just grid the map, define the upper left origin, and enter X-Y points for all features. A map of reasonable detail should only take a few evenings. Fortunately, everyone in your area can use the results of your efforts!

Look for an APRS BBS in your state. Already, Ohio Missouri and Calif have developed dozens of local maps. The biggest APRS states are CA,OH,FL,TX,MD,AZ,VA,NJ,and NewEngland. Thirty states have three or less users. If you are in one of these states, AND DONT HAVE A DECENT MAP OF YOUR AREA. Let me know! There are more APRS maps now than fit on the original APRS distribution disk. See XTRAMAPS.txt.

APRS PROTOCOL: APRS uses Unnumbered Information (UI) frames which are transmitted without ACKS to avoid the problems, complexities and in-efficiencies of a normal fully connected network. To be a good APRS operator, you need to understand DIGIPEATING and the use of the MY ALIAS and UNPROTO commands, since you are responsible for your own best path within the network. If you are unfamiliar with these UI terms, consult your TNC user manual. Although the APRS documents speak frequently about BEACONS, it is important to note that these are NOT the TNC BText beacons. While APRS is on-line, it suppresses the TNC BText and generates its own Status and Position reporting UI frames.

PACKET POSITIONS ON ALL FREQS: Finally, encourage all BBS's, NODES, Servers, and stations in your area, to place their LAT/LONG in their beacon text using the format: BT !DDMM.xxN/DDMM.xxW/...comments. APRS will accept this fixed station position format anywhere in the ID text. APRS will also plot the positions of stations reporting by Grid Square surrounded by brackets [FM19xy]. If all packet assets get in that habit, then APRS will automatically plot a map of packet activity on any frequency! If stations will also put the new Power/antenna/gain format in their BText, then effective communications ranges can also be displayed! See PROTOCOL.txt for formats.

STAND-ALONE-GPS-TRACKERS: All PACCOM TNC's with version 3.2 firmware include a GPS command that tells the TNC to accept GPS data (NMEA-0183 format) on the serial port and place it in the TNC LOCATION TEXT. Then the TNC will transmit that Position at a rate set by the user! Note that this is a dedicated stand-alone application, and while the TNC is in this mode, it no longer operates as a normal TNC for two-way communications. But, this is the simplest method to build a stand-alone-tracker. If you are running the APRS software mobile on a laptop, then see GPS.txt for ways to use ANY TNC or ANY GPS while still operating on the air with APRS.

MORE READING: For more info on APRS, see page 92 of July and page 11 of the

August 1993 QST and the Dec 1993 issue of CQ. Also get the February 1994 issue

of QEX for the article on Interfacing GPS to packet. More coverage was provided in October 94 issue of 73 magazine under the topic of HOMING IN, and a full page of pictures on page 14 of the DEC 94 issue of QST. Look for more in the Jan 95 issue of 73. Also see the front page of the May 1993 issue of the AMSAT journal (but the registration information is incorrect there).

BBS ADDRESS: My BBS address is WB4APR @ WB3V.MD. I cannot respond to tons of traffic, but will try to keep up... Do feel free to send me any comments or suggestions, but avoid any traffic in which I may have a pecuniary interest! Hi Hi! Look for a local APRS point of contact for your state. Some states have dedicated APRS phone line BBS's for distributing local APRS maps. Ohio is up to 50 maps as of Nov 94.

Other phone line BBS's known to carry APRS:

CALIF 415 359-6985 Daly City
OHIO 614 443-4249 Columbus
FLORIDA 407 575-9680
VIRGINIA 703 255-2172 Vienna
703 362-8673
ARIZONA 602 938-7528
INTERNET @ muncey.com ip 140.174.180.1 in Public\APRS
loggon as Guest or Anonymous with EMail addr as Pwd.
@ oak.oakland.edu in SIMTEL/PACKET/PUB/HAMRADIO
(Im not sure of the sequence of the above directories)

From janderson@ram.net Thu Jan 05 14:49:01 1995

Return-Path: <janderson@ram.net>

Received: from ram.net by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rPz60-0000nBC; Thu, 5 Jan 95 14:48 CST

Received: by ram.net (5.65/1.2-eeef)

id AA09704; Thu, 5 Jan 95 15:42:05 -0500

From: janderson@ram.net

To: aprssig@tapr.org

Subject: Re: [APRSSIG:37] WX Data

Date: Thu, 05 Jan 95 15:36:10 EST

Message-Id: <02050.15021591@RAMail>

Version: RAMail 2.8h

Location: TYSON'S CORNER (2712) MCLEAN, VA

> When APRS received WX data... how is it displayed? I've been playing
>with a temperature IC that lets me determine the outdoor temp using my
>PC. I can broadcast this info in a UI frame using JNOS. If an APRS box
>receives this info (assuming that it's formatted correctly.) how will
>it be displayed?

> Also... if I just have the Temp. data... do I have to specify 000
>for wind speed and direction?

>

> Thanks.

Here's the WX.TXT file from the DOS version that may help some.

73,

Jack
N4ULS@ram.net

WX.txt 6.2b USING APRS IN WEATHER AND SKYWARN APPLICATIONS

New in 6.2b: You can now enter Wind in KPH and temp in Celsius
New in 6.1: Added user WX alarms (See Alarms below). Finally fixed in 6.2a
New in 6.0: You can now mark large areas from 100' to 100 miles on your maps
and send the area as a symbol. Very useful for WX WARNINGS!

KPH and CELSIUS: I have added the ability to enter and display KPH and degrees Celsius. You enable this by doing a manual WX report entry and answer with EITHER K for KPH or C for Celsius. From then on, the WX display at the top of the screen will display in those units. You can make this permanent, by saving a CONFIG file. The on-air APRS WX protocols, however, still will be in MPH and F. Also, the ALARMS will be compared to MPH and F values.

WX ALARMS: At the suggestion of the NWS in Indianapolis, I have added certain user settable WX alarm settings. When ever a WX report comes in that exceeds the value, the station is plotted in RED and an ALARM is sounded. The alarms are WIND, TEMP, and RAIN. Besides the obvious wind threshold, the max and min temp settings can be used to warn of the passing of a warm or a cold front. These alarms can make an almost un-attended SKYWARN network! Just install an APRS computer at the NWS site, and let the NWS operators set the alarm levels. Then without transmitting a single packet (there is rarely a licensed HAM on the premises) the APRS screen will show all of the SKYWARN data and what sites are reporting alarm conditions!

CLEARING ALARMS: When an alarm condition occurs, the station is drawn in RED and the map is automatically re-drawn to center on that station. Also, the station is marked on the P-list with the ALARM marker. To clear the alarm, simply hook the station on the map, and then UNhook it (hit the ENTER key twice). To clear the A on the P-list, hook the station and hit the A key. Normally, the ALARM on the P-list will only sound if that station MOVES. Since a WX station should not move, there is really no problem in leaving the A on the Plist until convenient to remove it.

OVERSIGHT in 6.1! Bells going off all the time, due to stations entering manual WX reports that do not exactly match the U-II generated APRS WX format. Also the PHGxxxx or DFSxxxx formats are interpreted as WIND and the ALARM sounds! Its fixed in 6.11. Sorry. xxxxx really fixed in 6.2a!

DISABLING WX ALARMS: In order to not set off alarms, simply set your thresholds higher than any values expected. The defaults are 100 for the high temp, 0 for the low temp, and 30 kts for the wind. Set Rain =0 to turn it off. If you live on Hawaii or Alaska, you may need to change these. In version 6.2a, these are saved in the config file.

BEGIN: The Automatic Packet Reporting System (APRS) is an ideal tool for reporting weather conditions via packet. The system is compatible with both human entry as well as automatic weather station entry of weather conditions. There is a \$9 serial interface option in APRS to accept the serial output of the ULTIMETER-II home weather station. With this connection, your wind conditions, temperature and optionally rain information are all automatically inserted into your position/weather report packet. You can even mount an Ultimeter-II remotely with only a TNC and Radio, and have it periodically report the remote weather conditions.

In the APRS system, current conditions at any station are broadcast to all stations on the net in a periodic fashion. Not only are these individual conditions available to all stations on the net, but also importantly, the location of these conditions are also displayed. There are several capabilities of APRS that are directly applicable to the SKYWARN:

MAP DISPLAY - Shows the location of all reporting stations, their wind speed and direction. Can also show the location of other objects, such as reports of TStorms, Hail, Tornados, etc. Now in version 6.0, you can mark large areas and send the borders either as a rectangle, circle, triangle, or lines. Use the OBJECTS-AREA symbol. Typically, use the color blue for thunderstorms, and red for tornados.

WEATHER ONLY - Using the normal J command, Just weather stations can be displayed on the map to eliminate the clutter of other packet stations. There is a WEATHER menu of commands, and the APRS N key will cycle through each APRS weather station in turn and display the weather conditions for each one in a box on top of the screen. The location of the displayed station is highlighted with a blue circle. Whenever a new report comes in from the selected station, the weather window is automatically updated.

REPORT BROADCASTS - The individual station weather conditions can be manually placed in the Beacon Broadcast from each station or automatically using the APRS WX option (\$9) and ULTIMETER-II serial interface. These reports are typically broadcast every 10 minutes. The report is also available at anytime if an APRS user sends the WX station an APRS Query. There is a special WX query that will request all WX stations to immediately report.

STORM/HURRICANE TRACKING - Any station may place a storm or other object on his map, and the same symbol will be transmitted to all other stations in the net. This is ideal for transmitting the location of a storm or Hurricane. If the course and speed of advance of the storm is included in the position report, then the object will automatically be dead-reckoned on all screens until the next update. Any station can update the location of the storm as information becomes available. The updating station will automatically overwrite all posits in the net and will become the new reporting station for the object. This prevents duplicate reporting and eliminates dependency on reporting stations that might

disappear and not update an object that they originated.

NOTE: Since APRS dead-reckons the position of moving objects as time progresses, the symbol on the map is presented where it SHOULD be, but NOT where it was when first reported. If you use the cursor to try to hook one of these objects on the map, you must hook the little gray circle which marks the position of the actual report, and not the symbol itself.

NATIONAL WEATHER SERVICE DISPLAY - KD4UYR in Florida had written a data base program that would parse National Weather Service hourly bulletins into APRS compatible Backup files. After version 3.10, APRS has built-in commands to perform this function on line!. See below on the details.

OPERATOR MESSAGES - The Point-to-point message capability can be used for operator to operator messages and alerts.

COMMENTS - Transmitted along with each position report, there is a short comment field which can be used to report weather conditions, station status, intentions or other broadcast type information.

VEHICLE TRACKING - APRS can track the movements of any mobile with a GPS or LORAN receiver properly interfaced to a packet TNC.

SKYWARN APPLICATION: The map display has the capability of presenting both a station's position and his course and speed. APRS recognizes a special weather report indicator (W) so that all Wx reporting stations are highlighted in blue and the software recognizes that their course and speed indicators are for wind reporting and not for station course and speed. Note that APRS does not recognize 000 as North, but instead recognizes 360. A value of 000 is assumed to mean there is no wind direction available. Other than for the automatic ULTIMETER-II interface, the comment field can be used for a variety of free-format weather reports which can be tailored to the conditions at any time. Since a manually entered WX report should retain the time that it was valid, APRS will not update the date and time of each stations position (WX) report unless the automatic ULTIMETER-II interface is operating.

In addition to the weather data and comments on the Plist, the station Beacon Text is also available for broadcasting additional amplifying info. Any station running APRS simply calls up the LATEST display and sees the current conditions from all stations on one screen. Similarly, he calls up the map display and sees the location of all stations and all specially reported conditions. Any authorized station can insert the location of any special object on the map. The location of that reported object or condition is displayed on all screens in the network. Even non-packet voice stations making a weather report can be placed on the map (like an object) by another APRS packet operator. His station will appear similar to any other APRS weather station, except that his report will include a marker indicating that he was manually placed on the map by another operator. We have used APRS on weekends for reporting the Cheseapeake Weather and Traffic net. Load the SKYWARN.BK file to see the APRS network during one of these nets. Also see the new section on how to load National Weather Service reports onto your APRS

map.

NATIONAL WEATHER SERVICE HOURLY BULLETINS

KD4UYR Kevin, in Clearwater Florida wrote a database program to crunch the NWS hourly weather bulletins into APRS compatible BACKUP files. He could then load them into APRS for display on the map. I have added this feature to APRS in the WEATHER menu. The GetNWS command will search the NWSposns.DAT file for all NWS stations within the boundaries of the current APRS map display. If the map is larger than 256 miles, then only a radius out to 250 miles is selected to prevent overloading the L and P lists. Similarly a minimum radius of 32 miles is also used to be sure that at least one NWS station is found. The database only had NWS locations to the nearest whole minute, so the positions are only accurate to the nearest mile or so. This process is my easy way of selecting the stations that you want to display.

The LOAD-WX-DATA command is used for loading the NWS data if available. This command will ask you for the name and path to a text file containing the downloaded NWS hourly reports. This file can be obtained from most of the commercial data servers or various BBS's. Do not ask me where to find them... The real WX nuts out there seem to have no trouble finding them, but in most cases it is a pay as you go service... APRS will then scan through the NWS bulletin file looking for each station that you have on your APRS P-LIST. If it finds a matching NWS bulletin, it will parse out the Wind speed/direction, the temperature and dew point and the barometric pressure and place these on the P-list. Then it will take the remainder of the report and place it in the L-list so that you can see the raw data which includes other notes about cloud cover and special conditions. In both cases, the time of the entry in the P and L-list will be the time of the NWS report (in local time). The date is assumed to be the current date.

Unfortunately, these reports were designed for human reading and are also generated by hand at all the NWS sites. There are frequently errors or improperly formatted reports. By looking at the L-List, most of these errors can be detected. If APRS can not make sense out of the report, it indicates with the words "garbled report" on the P-list. Once you have the display you like, you can select stations on the P-list for uplink to the net as desired. Since it is easy to generate lots of data and packets in this manner, I hope that stations will be considerate and not overload the channel. Once everyone on the net sees the reports, the uplinking station should consider Quitting to uplink in order to reduce QRM. Once the uplinked reports are no longer valid, the uplinking station should KILL them which will kill them from everyone's display (they will still be on everyone's P-list, however, for subsequent display using the SHOW command). Remember that KILL just marks them for NOT displaying so once you KILL them, you need to continue UPLINKING the KILL status for several beacon periods to be sure you killed everyone's version that is on the net.

DEMONSTRATION: To get an idea of how APRS works in a SKYWARN or other weather reporting environment, load the backup file SKYWARN.BK using the FILES-LOAD command. The stations would normally be bright blue, but all stations fade to gray if they have not been heard from in over 2 hours. Use the P command to pull up the position/weather reports and notice the format for the station

W3ADO. That station is reporting the wind and temperature automatically using the optional ULTIMETER-II interface. To demonstrate the NWS capability, center your map on Florida at the 128 mile range enter the WEATHER-GET_NWS_SITES command. Once all the NWS stations appear on the map, then enter the WEATHER-LOAD_WX_FILE command to load the sample NWS data file provided by KD4UYR. Look at the P and L-lists to see what is going on...

ULTIMETER-II INTERFACE: To permit automatic weather station reporting, APRS includes an optional serial interface to the ULTIMETER-II home weather station.

(I offered to develop one for DAVIS instruments, but they call their data proprietary and will not share it with HAMS). The optional APRS WX routine is activated by a separate validation number (\$9). Once activated, APRS accepts the serial data output of the ULTIMETER-II and puts the information in your stations position/weather packet automatically for unattended weather reporting. (If you have a different home weather station that has a serial data output, and can convince me that it is worth the effort and widespread in the HAM community, let me know.) The ultimeter comes in two configurations which are not distinguishable by the user. One version outputs wind in MPH and the other in KPH. The user display can select either units, but the serial output is always the same. The difference is that the MPH units begin each line with a * while the KPH units begin each line with the # sign. In version 4.05, APRS recognizes this difference and converts the # units to MPH by dividing by 1.6.

RAIN VALUES: In the Ultimeter-II, two rain count accumulators are maintained. These are both incremented every time the rain gage clicks. The normal gage clicks every tenth of an inch of rain. A special order gage clicks every one-hundredth of an inch. In version 4.05 APRS asks you which gage you have so that all on the air reports are in tenths of an inch. Since the U-II values only have meaning if everyone knows when they were last reset, APRS keeps a running accumulation every 10 minutes for the last hour so that it can compute and transmit only the difference in rain for the last 60 minutes. This way the rain reading has some meaning without prior knowledge by all stations receiving it. This rain/hour is intended for severe storm watches and other interest in real-time conditions. A reading of /R12 means that 1.2 inches fell in the last hour. After 60 minutes, this value will return to zero.

After my first heavy rain fall, I came home a few hours later and of course, the RAIN/HOUR report was then showing 0, since more than an hour had passes since the last rain! Obviously, this RAIN/HOUR is only good for skywarn, so I added a Precipitation field that shows the RAIN/DAY. This satisfies the curiosity of the casual APRS stations that just want to see how much rain we had during the last 24 hours. A reading of /P16 means that 1.6 inches have fallen since the same hour yesterday. The format we are now using looks something like this:

.../LAT/LONG/CSE/SPD/Txxx/Dxxx/Rxx/Pxx/Bxxx/free text comments...(auto)

Where CSE and SPD show the wind conditions

/T and /D are temperature and DewPoint

/R and /P are Rain per hour (tenths) and Rain/day (tenths)

/S is Snow per day (in INCHES) replaces Rain field
/B is barometric pressure in inches (ignoring the leading 2 or 3)
(auto) means it is an automatic report and therefore is current.
Any field not available is not included

With the WX interface enabled, the normal APRS decaying of position/wx reports still holds as long as nothing changes (except the wind). This way, redundant WX reports do not cloud the channel. If any value, Position, temperature, rain, barometric pressure, or comments change, then the periodicity is reset to the value set in the alt-SETUP-POStRate command. Since the wind is the most changing parameter, in version 5.9d I added the WX-WIND command to allow you to set a Wind threshold. Whenever the wind is above that threshold, the reporting period is also reset to the POStRate value. Nominally, you might want to set the POStRate value to about 4 minutes or so. This way, during changing WX conditions, or wind speeds above your threshold, the WX is reported every 4 minutes. Otherwise, the period rapidly decays back to the maximum APRS delay period (default is 15 minutes). For a weather station, you might want to change this MaxPeriod to about 10 minutes so that stations in the net get at least 6 wx reports per hour. To change this value, you must use a DOS editor to change it in your CFGxxxx. file. You will find it listed as 750, Maximum time period between packets. (750 seconds = 15 minutes). Of course, a WX/position report will be transmitted by the APRS station at anytime, in response to an APRS query; either an ALL NET Query, ?APRS, or a Wx only Query, ?WX, or a one station Query (by sending ?APRS in a message).

SERIAL INTERFACE CABLE: Peet Bros sells a serial interface cable with a DB-25 connector to RJ-11. (Note, this is a DB-25, not a DB-9).

Since the ULTIMETER-II has no negative supply, a 5 K pulldown resistor is added to the DB-25 connector between Pins 2 and 3. This uses the -5 or -12 volts on the TXD line to bias the RXD line. When I plugged in a standard phone

line connector to the ULTIMETER-II serial data output (unmarked connector on their junction box, or side of the Display unit), I found the data output on the green and black wire of the RJ-11. Black is data ground, and green was RXD. I do not know if the wire colors are standard but they would be either 1 and 3, or 2 and 4 depending on which side is up, and the ground is the one at the end. The Peet Bros cable includes transient protection and RF filtering

to protect your computer as well as the bias resistor. Remember, the anemometer is like an antenna, high in the air. It can radiate RFI and take lightning charges...

REMOTE ULTIMETER-II OPERATION: There are two ways to combine a TNC and U-II for stand-alone remote operation. One uses the new features in the PACCOMM TNC to periodically transmit a WX report, and the other permits APRS stations to interrogate the WX conditions remotely. Here's how:

PACCOMM: Simply program the PACCOMM GPSSTRING parameter to recognize the * or # character instead of the usual GPS formats. Then set LOC to every 600 and GPS ON and the TNC will load the WX report into the TNC LText and transmit it once every 10 minutes. Also SET ECHO off! This is because the U-II uses a 10k resistor on the TXD line to bias the RXD line. If the TNC is echoing the U-II data, then total garbage results! (Thanks to Jeff,

KD4GOE in Mobile, ALA for figuring that one out!)

OTHER TNC:

- 1) Install the U-II and a TNC at the remote site. Install a data switch so that U-II data is only input to the TNC when the TNC is connected by either wiring to the CONNECTED LED or to the DCD line if implemented
- 2) Place the TNC location in the BText using the usual APRS fixed format with the WX () symbol: !LLmm.xxN/LLLmm.xxW_Remote U-II WX station...
- 3) If the TNC is also serving as a WIDE area APRS digi, place the word WIDE at the beginning of the comment field so that it shows up in green, and include a note that WX is available. Set MYA WIDE. Set your UNPROTO path to UNproto APRS via WIDE,WIDE... (assuming there are other WIDES nearby)
- 4) Set LFIgnore ON. Set CHECK to 6 and AX25 off so that the WX connection will time out after 60 seconds.

At this point, any station connecting to the TNC will get the short ULTIMETER 15 character weather strings as long as they are connected. The following changes were made to APRS so that the connected station and all OTHER monitoring stations could see the data.

- a) APRS now looks for the U-II data (even if not transmitted to APRS) so everyone on frequency sees the WX displayed, although it is being transmitted via a CONNECTION to only one station.
- b) The station that connected to the TNC has to be able to see the data also. To enable this, he must first turn MCON ON so that he can monitor while connected, second, he must escape out of the APRS TALK mode so that APRS can process the data. In 5.00 you can use the alt-X key instead of ESC to return to APRS. Alt-X will leave your connection intact instead of forcing a Disconnect as it usually does. This feature is not documented anywhere else, since it only is useful here for WX.
- c) As long as you are connected to the remote TNC, the U-II data will be transmitted about once every 5 seconds.

Since the remote site can also be a WIDE area digipeater, it should show the WX circle symbol, but it will be GREEN to indicate it is also running with the ALIAS of WIDE. Whenever U-II data is transmitted, APRS will overwrite the digipeater position with the Ultimeater-II WX/posit report. The last WX heard will remain in the P-list and on the screen until the next BText is transmitted by the DIGI TNC.

We are encouraging the Manufacturer of the Ultimeater to make a HAM/TNC mod so that the U-II can be connected to a remote TNC and it will only output WX data once every 6 minutes or so. If the TNC is placed in the CONVERSE mode, these short WX reports will be transmitted. This type of operation will automatically update all APRS users of all remote site Weather conditions on a periodic basis. Until this new device is available, however, the system described above will work and will actually provide a more responsive display of short term weather conditions while someone is connected.

DATA LOGGING: The POSITION FILTER normally causes APRS to NOT save duplicate position reports that are within 80 yards of a previous report. When this filter is toggled OFF, it reduces this filter range to 20 yards AND enables all WXstation logging. In this mode, all WEATHER station reports are saved in a track history file. All over-the-air reports are only received once every 10 minutes, but your own report will be saved at the rate set by the Set-Pos-Rate command.

AUTOWX.EXE: This is a program written by Les, N5K0A to also interface the U-II to a TNC with a PC. It allows a direct connections for WX info, it does WX beacons in APRS format, and allows continuous logging of WX data to a binary file just like the U-II ULTIITSR program. I have not used nor tried this program. See Les's documentation in the AUTOWX.DOC file (in README directory)

FINAL NOTES: Since the WXstation option is always updating your outgoing position report, this makes it impossible for a WX station to report a beam heading during a Direction Finding evolution. If you use the BEAMHEADING command to enter a beam heading on a Fox or Jammer, then your WX station is disabled. To restore your WX station, restart the program.

\$\$\$ The ULTIMETER-II is available from PEET Bros 1-800-USA-PEET (872-7338) for \$179 plus \$20 for their Serial interface cable and \$60 for the optional rain guage (self emptying, reads in 0.1 inches) plus shipping of \$8.25. (For APRS, you don't need their \$40 software but it is a good package for doing the usual home WX logging and analysis) See adds in QST, CQ, Popular Mechanics, etc... (these were 1993 prices)

\$ The optional APRS registration for the ULTIMETER-II is available from the author for \$9 and may be ordered with APRS or as an option later.

From kf5mg@kf5mg.ampr.org Thu Jan 05 14:51:53 1995

Return-Path: <kf5mg@kf5mg.ampr.org>

Received: from untgate.ampr.org by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rPz9w-00019TC; Thu, 5 Jan 95 14:51 CST

Received: from kf5mg.ampr.org by untgate.ampr.org (JNOS1.10g) with SMTP id AA61335 ; Thu, 05 Jan 95 14:50:36 CST

Received: from mgos2.ampr.org by kf5mg.ampr.org (JNOS1.10Hx) with SMTP id AA46494 ; Thu, 05 Jan 95 14:50:09 UTC

Received: by mgos2.ampr.org (IBM OS/2 SENDMAIL VERSION 1.3.6)/1.0) id AA0593; Thu, 05 Jan 95 14:50:09 -0600

Message-Id: <9501052050.AA0593@mgos2.ampr.org>

Date: Thu, 5 Jan 95 14:46:49 cst

From: kf5mg@kf5mg.ampr.org

To: aprssig@tapr.org

Subject: [APRSSIG:38] Re: WX Data

> I will get you the exact format so that you can do this..

>

> It would include your lat/lon, station type of Weather which is the

> underscore charcter, and then the weather data, yes, unknown data would be
> put in as zeros..

>

> Keith Sproul

Thanks. I've got the data format (with the underscore character) but I didn't know if an unknown wind speed and direction should be reported as 000 or not. 000 for wind speed and direction are valid for calm days. Seems like it might be hard to figure out who's got Wind Speed equipment on a calm day and who doesn't have the equipment. Now a negative wind speed could flag the data as being invalid. Wonder what APRS would do with a negative wind speed?

```
73's de Jack - kf5mg
Internet      - kf5mg@kf5mg.ampr.org           - 44.28.0.14
              - kf5mg@metronet.com            - work (looking for)
PBBSnet       - kf5mg@kf5mg.#dfw.tx.usa.noam   - home (817) 488-4386
+=====+
+                      D.A.M. - Mothers Against Dyslexia                      +
+=====+
```

From dwhansen@panix.com Thu Jan 05 17:25:25 1995
Return-Path: <dwhansen@panix.com>
Received: from panix.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQ1YY-00015VC; Thu, 5 Jan 95 17:25 CST
Received: by panix.com id AA21688
(5.67b/IDA-1.5 for aprssig@tapr.org); Thu, 5 Jan 1995 18:25:18 -0500
Date: Thu, 5 Jan 95 18:25:18 EST
From: David Hansen <dwhansen@panix.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:31] Query on documentation
In-Reply-To: Your message of Thu, 5 Jan 95 12:57 CST
Message-Id: <CMM.0.90.0.789348318.dwhansen@panix.com>

Bernard:

Greetings... Have you gotten the APRS software? APRS is just a program which connects the elements of a map with a packet position location system. The packets contain the call and position of the station. These positions are then shown on the map. If you had a GPS receiver connected to a laptop and a TNC/Radio, you could be seen moving on the map. Here in the northeast NYC area there are quite a number of users, alas, non of us move and looking at the map becomes quite a bore. I'm sure this will change as more users come aboard and they bring their \$\$\$ along.

I am also a sailor, I repaired a Pierson 26 and spend time out on the water. I leave her in the water during the winter and have gone out in Jan and Feb.

I am a retired New York City Police Officer, so I have a little time on my hands now and then. I am 39 years old and unfortunately had a little ticker trouble which forced me to retire. I take it easy.

Be well...Dave N2LZX

From klarson@access.digex.net Fri Jan 06 06:22:57 1995
Return-Path: <klarson@access.digex.net>
Received: from access4.digex.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQDgx-0000HVC; Fri, 6 Jan 95 06:22 CST
Received: by access4.digex.net id AA22225

(5.67b8/IDA-1.5 for aprssig@tapr.org); Fri, 6 Jan 1995 07:22:41 -0500
Date: Fri, 6 Jan 1995 07:22:40 -0500 (EST)
From: Kent Larson <klarson@access.digex.net>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:31] Query on documentation
In-Reply-To: <9501051344.D7522SE@industry.org>
Message-Id: <Pine.SUN.3.91.950106071642.21512C-100000@access4.digex.net>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII
Content-Transfer-Encoding: QUOTED-PRINTABLE

Hello Bernard,

The best thing to do is get the program zip files and go through the=20
doc. You can ftp the Mac version from ftp.ucsd.edu=20
hamradio/packet/tcpip/incoming. I think you will find a dos version in=20
the same location, or close by. If not, you can download the latest=20
version from the Frequency Forum BBS, 703-207-9622.

73,

Kent=20

On Thu, 5 Jan 1995 bjoseph@industry.org wrote:

>=20

> In order to get up to speed quickly, I'd like to obtain printed
> information on what APRS is.

>=20

> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
> ham, so I should understand what's going on. Yet, everything I've read
> on the subject in current ham literature seems exceptionally trivial.
> Can somebody point me in the right direction?

>=20

> - - - - -

> Bernard W. Joseph, K8LIX Internet: bjoseph@industry.org
> (810) 468-5869 AX.25: k8lix@n8eqd.#semi.mi.us.noam
> Avoid execrable gender-circumlocutions: use mafe.

>=20

> ---

> =FE SLMR 2.1a =FE

>=20

From akasbb1@peabody.sct.ucarb.com Fri Jan 06 07:38:10 1995

Return-Path: <akasbb1@peabody.sct.ucarb.com>

Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQErk-00012wC; Fri, 6 Jan 95 07:38 CST

Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA14572; Fri, 6 Jan 1995 08:37:37 -0500

Message-Id: <9501061337.AA14572@peabody.sct.ucarb.com>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Fri, 6 Jan 1995 08:37:18 -0500

To: aprssig@tapr.org

From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: APRS Protocol Enhancement
Cc: ablock@nubis.rutgers.edu, dalpert@merle.acns.nwu.edu, daxenos@bu.edu,
"David P. Worrall" <70214.2530@CompuServe.COM>, Emmet2@aol.com,
heyu@aol.com, jan@archimedes.chinalake.navy.mil,
kb2ear@kb2ear.overleaf.com, rbarris@quicksilver.com,
sdimse@umbio.med.miami.edu (Steven S. Dimse), skou@inel.gov,
thayes@hardees.rutgers.edu, tstader@aol.com, wolft@dbisna.com,
wpmichel@srp.gov, ka6eyh@muncey.com, wannamaker@macnet.vpharm.com,
kc6rol@amsat.org, 72170.30@compuserve.com, delta2@infi.net,
castonj@ireq.hydro.qc.ca, lipson@ctobbs.com, rewing@mitre.org,
DwainM7367@aol.com, "Joe Moell" <joemoell@cup.portal.com>,
gpotter@collabra.com, 74736.3171@compuserve.com,
Richard H Inacker <inacker@pogo.den.mmc.com>, Sam_Lipson@Berlex.Com,
GregNel123@aol.com, ken@spacetime.mv.com,
philkeys@olympus.net (Phil Keys), Dick Mead <mead@ucs.usc.edu>,
rtm@Newton.apple.com (Bob Martin)

APRS Enhancement.

Bob Bruninga (WB4APR) called me yesterday about a new feature he was implementing in the APRS protocol. This was a feature that he and I had discussed quite awhile back, but he had not finalized yet.

This new feature is something that I call SELECTIVE AREA QUERY. In the normal APRS protocol, you can send a QUERY to EVERYBODY which is:

?APRS?

You can also send a query to an INDIVIDUAL station by sending the same string as a MESSAGE to that station.

The new feature is the ability to send a QUERY to selected AREA and have ONLY those stations that fall within that area respond. The format of this new query is:

?APRS?<lat>,<long>,<dist>
?APRS?000.00,0000.00,0000
?ARRS?040.00,-104.00,0050

This example requests all stations within 50 miles of 40N 104W. The Lat and Long is in plus/minus decimal degrees and the distance is in miles. When a station sees this query, it determines if it meets the distance qualification, and if so, responds with a normal position report. If it is outside of the distance criteria, it simply ignores the query. Another nice thing about this query is that it is fully backward compatible since the older versions of APRS and MacAPRS will simply ignore what is after the ?APRS? and respond anyway.

I have not seen the implementation of this on the DOS program yet, but it involves using the cursor to move to the center of the region you want to query, selecting a distance, again with the cursor, then the command will get sent.

On the Mac version, this is done by holding down the Control-Key, and simply Click-Drag with the mouse from the Center of the region you want out to the radius you want. The program displays a dynamically changing circle showing the area covered, also showing the miles in the status bar at the bottom of the screen. When you release the mouse, the query command gets sent.

On the RECEIVING end, I display the queried area by drawing the appropriate circle on the map whenever one of these queries is received. If the query affects you, you hear a radar-sounding PING indicating that you have been queried. We have already had this up on the air and found it to be quite neat and fun.

The new version of MacAPRS that includes this is MacAPRS 1.2.1 and is up on ftp.ucsd.edu in the /hamradio/packet/tcpip/incoming directory.

Keith Sproul, WU2Z

Keith Sproul	Amateur Radio: WU2Z
Union Carbide Corp	Home Address:
PO Box 670	698 Magnolia Road
Bound Brook, NJ 08805	North Brunswick, NJ 08902-2647
Work: 908 563-5389	akasbb1@peabody.sct.ucarb.com
Fax: 908 563-5035	Packet Radio: wu2z@kb4cyc.nj.usa
Home: 908 821-4828	AppleLink: Sproul.K

From schwarm@spectre.mitre.org Fri Jan 06 09:40:31 1995

Return-Path: <schwarm@spectre.mitre.org>

Received: from mbunix.mitre.org by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rQGmB-0000PfC; Fri, 6 Jan 95 09:40 CST

Received: from spectre.mitre.org (spectre.mitre.org [129.83.61.124]) by mbunix.mitre.org (8.6.9/8.6.9) with ESMTP id KAA03288 for <aprssig@tapr.org>; Fri, 6 Jan 1995 10:40:25 -0500

Received: from localhost (schwarm@localhost) by spectre.mitre.org (8.6.4/8.6.4) id KAA14354 for aprssig@tapr.org; Fri, 6 Jan 1995 10:40:25 -0500

Date: Fri, 6 Jan 1995 10:40:25 -0500

From: Steve Schwarm <schwarm@spectre.mitre.org>

Message-Id: <199501061540.KAA14354@spectre.mitre.org>

To: aprssig@tapr.org

Subject: Re: [APRSSIG:31] Query on documentation

I did a talk at a ham fest on how it works and I'd be glad to mail you a copy of the slides. They were done with Power Point. I could send you a post script output, the power point file uuencoded or paper copy by the post office.

Stephen(Steve) Schwarm, W3EVE
Principal
The MITRE Corp.

202 Burlington Rd MS B155
Bedford, MA 01730
(617)271-4600
FAX: (617)271-4686
Schwarm@mitre.org
Packet: W3EVE @ K1UGM.#EMA.MA.USA.NA

From schwarm@spectre.mitre.org Fri Jan 06 09:54:09 1995
Return-Path: <schwarm@spectre.mitre.org>
Received: from mbunix.mitre.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQGz0-0000P6C; Fri, 6 Jan 95 09:54 CST
Received: from spectre.mitre.org (spectre.mitre.org [129.83.61.124]) by
mbunix.mitre.org (8.6.9/8.6.9) with ESMTP id KAA05989 for <aprssig@tapr.org>; Fri,
6 Jan 1995 10:54:04 -0500
Received: from localhost (schwarm@localhost) by spectre.mitre.org (8.6.4/8.6.4) id
KAA14418 for aprssig@tapr.org; Fri, 6 Jan 1995 10:54:04 -0500
Date: Fri, 6 Jan 1995 10:54:04 -0500
From: Steve Schwarm <schwarm@spectre.mitre.org>
Message-Id: <199501061554.KAA14418@spectre.mitre.org>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:35] Re: Query on documentation

I did a presentation at the Boxboro Ham Fest on how APRS works and
I'd be glad to send the slides to the group. I could send a post
script file or a uuencoded, zipped power point file. As a last resort
I can send paper copies. Please send an SASE.

Stephen(Steve) Schwarm, W3EVE
Principal
The MITRE Corp. Home:
202 Burlington Rd MS B155 30 Hayden Woods
Bedford, MA 01730 Wrentham, MA 02093-1282
(617)271-4600
FAX: (617)271-4686
Schwarm@mitre.org Packet: W3EVE @ K1UGM.#EMA.MA.USA.NA

From pete@bearnnet.demon.co.uk Fri Jan 06 14:12:17 1995
Return-Path: <pete@bearnnet.demon.co.uk>
Received: from bearnnet.demon.co.uk by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQL18-0000kjc; Fri, 6 Jan 95 14:12 CST
Date: Fri, 06 Jan 1995 19:44:50 GMT
From: pete@bearnnet.demon.co.uk (Peter Baston)
Reply-To: pete@bearnnet.demon.co.uk
Message-Id: <255@bearnnet.demon.co.uk>
To: aprssig@tapr.org
Subject: U.K. N.G.R.
X-Mailer: PCElm 1.10
Lines: 23

Hi all !

My first version of APRS was version 5.9cn, which I got
from GOMAM, the RSGB's Emergency Communications Officer. This

version displayed U.K. National Grid Reference as well as Lat/Long in the top left of the screen, only when the cursor is in the UK area.

I then got hold of version 6.2b (the latest) from the ARN BBS. I note that this version no longer displays NGR.

Does anybody know what happened to the NGR ? Was 5.9cn maybe a special version for the UK ?? I see no mention in the readme files.

P.S Hi Keith, WU2Z, I used to be a neighbour of yours (East Brunswick) I think we may have spoken on the Oldbridge repeater once ?

Pete GW0PJA / AA2DZ.

--

Pete Baston, Clwyd, North Wales, U.K.

From mmunster@qualcomm.com Fri Jan 06 14:17:50 1995
Return-Path: <mmunster@qualcomm.com>
Received: from happy.qualcomm.com by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rQL6a-0000ngC; Fri, 6 Jan 95 14:17 CST
Received: from [129.46.12.181] (mmunster-mac.qualcomm.com [129.46.12.181]) by happy.qualcomm.com (8.6.9/QC-BSD-2.5) with SMTP id MAA06610 for <aprssig@tapr.org>; Fri, 6 Jan 1995 12:17:43 -0800
X-Sender: mmunster@happy
Message-Id: <ab33547606021004df74@[129.46.12.181]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Fri, 6 Jan 1995 12:17:55 -0800
To: aprssig@tapr.org
From: mmunster@qualcomm.com (Marvin Munster x5388)
Subject: Re: [APRSSIG:35] Re: Query on documentation

I asked a similar question when this list first came alive. I asked: What is APRS and how could I use it? What can we do with it? Is it practicle? Is it hard to implement? I have an Icom GPS receiver, can I use this to get started? What kind of maps does it produce? Are there software maps that this will interface to? ...and so on into the night... I had one response with out much detail, other than it was great. I also would like the information. Is there a FAQ somewhere? I would like to be part of the packeteers that gets this thing going.

SOMEONE - TELL US ABOUT IT.

Marvin. WB6PKK
mmunster@qualcomm.com

At 11:36 AM 1/5/95, david kelly wrote:

>> In order to get up to speed quickly, I'd like to obtain printed
>> information on what APRS is.

>>
>> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
>> ham, so I should understand what's going on. Yet, everything I've read
>> on the subject in current ham literature seems exceptionally trivial.
>> Can somebody point me in the right direction?
>>
>> - - - - -
>> Bernard W. Joseph, K8LIX Internet: bjoseph@industry.org
>
>You've hit the nail on the head Bernard, "...seems exceptionally trivial."
>APRS seems exceptionally trivial. I subscribed to this list to be
>enlightened but so far I'm underwhelmed.
>
>Of course with a message like this I'm sure to be flamed. Please share
>non-trivial flames with the list so we'll all be enlightened.
>
>73, David N4HHE
>dkelly@nebula.tbe.com

From mmunster@qualcomm.com Fri Jan 06 17:58:55 1995
Return-Path: <mmunster@qualcomm.com>
Received: from happy.qualcomm.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQ0YW-0001LRC; Fri, 6 Jan 95 17:58 CST
Received: from [129.46.12.181] (mmunster-mac.qualcomm.com [129.46.12.181]) by
happy.qualcomm.com (8.6.9/QC-BSD-2.5) with SMTP id PAA10018 for
<aprssig@tapr.org>; Fri, 6 Jan 1995 15:58:45 -0800
X-Sender: mmunster@happy
Message-Id: <ab33898c0d0210045802@[129.46.12.181]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Fri, 6 Jan 1995 15:58:58 -0800
To: aprssig@tapr.org
From: mmunster@qualcomm.com (Marvin Munster x5388)
Subject: Re: [APRSSIG:35] Re: Query on documentation

Is there a FTP site that this software can be obtained?
Marvin Munster - WB6PKK
mmunster@qualcomm.com

>> In order to get up to speed quickly, I'd like to obtain printed
>> information on what APRS is.
>>
>> I'm a retired physicist, a life-long sailor, and a QCWA-old, extra class
>> ham, so I should understand what's going on. Yet, everything I've read
>> on the subject in current ham literature seems exceptionally trivial.
>> Can somebody point me in the right direction?
>>
>> - - - - -
>> Bernard W. Joseph, K8LIX Internet: bjoseph@industry.org

>
>You've hit the nail on the head Bernard, "...seems exceptionally trivial."
>APRS seems exceptionally trivial. I subscribed to this list to be
>enlightened but so far I'm underwhelmed.
>
>Of course with a message like this I'm sure to be flamed. Please share
>non-trivial flames with the list so we'll all be enlightened.
>
>73, David N4HHE
>dkelly@nebula.tbe.com

From DJVelez@aol.com Fri Jan 06 19:11:34 1995
Return-Path: <DJVelez@aol.com>
Received: from mail02.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQPgq-0001SJC; Fri, 6 Jan 95 19:11 CST
Received: by mail02.mail.aol.com
(1.38.193.5/16.2) id AA21026; Fri, 6 Jan 1995 20:12:21 -0500
Date: Fri, 6 Jan 1995 20:12:21 -0500
From: DJVelez@aol.com
Message-Id: <950106201219_973395@aol.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:54] Re: Query on...

>You've hit the nail on the head Bernard, "...seems exceptionally trivial."
>APRS seems exceptionally trivial. I subscribed to this list to be
>enlightened but so far I'm underwhelmed.
>
>Of course with a message like this I'm sure to be flamed. Please share
>non-trivial flames with the list so we'll all be enlightened.
>

Hey guys, get a copy of the software and read the allabout.txt...this will
give you an overview. APRS is being used for entertainment, public service
and emergency planning!!! There's so much to do with it...just like our
hobby! Sorry this is short, but can we answer a specific question???

Dan N4WZR

From dkelly@tomcat1.tbe.com Fri Jan 06 22:06:19 1995
Return-Path: <dkelly@tomcat1.tbe.com>
Received: from tomcat1.tbe.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQSPs-0001UNC; Fri, 6 Jan 95 22:06 CST
Received: by tomcat1.tbe.com (920330.SGI/920502.SGI.AUT0)
for aprssig@tapr.org id AA07566; Fri, 6 Jan 95 22:05:03 -0600
Date: Fri, 6 Jan 95 22:05:03 -0600
From: dkelly@tomcat1.tbe.com (David Kelly)
Message-Id: <9501070405.AA07566@tomcat1.tbe.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:55] Re: Query on...
Reply-To: dkelly@nebula.tbe.com

> Hey guys, get a copy of the software and read the allabout.txt...this will

> give you an overview. APRS is being used for entertainment, public service
> and emergency planning!!! There's so much to do with it...just like our
> hobby! Sorry this is short, but can we answer a specific question???

>

> Dan N4WZR

I will do that. Again. Which has the best documentation, DOS or Mac?

--

David Kelly, N4HHE, n4hhe@amsat.org, dkelly@nebula.tbe.com

Democracy is a government where you can say what you think
even if you don't think.

From Emmet2@aol.com Sun Jan 08 08:58:29 1995

Return-Path: <Emmet2@aol.com>

Received: from mail02.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rQz4d-00008oC; Sun, 8 Jan 95 08:58 CST

Received: by mail02.mail.aol.com

(1.38.193.5/16.2) id AA20674; Sun, 8 Jan 1995 09:59:19 -0500

Date: Sun, 8 Jan 1995 09:59:19 -0500

From: Emmet2@aol.com

Message-Id: <950108095918_2383858@aol.com>

To: aprssig@tapr.org

Subject: Re: [APRSSIDIG:51] Re: Query on documentation

<<

I did a presentation at the Boxboro Ham Fest on how APRS works and
I'd be glad to send the slides to the group. I could send a post
script file or a uuencoded, zipped power point file. As a last resort
I can send paper copies. Please send an SASE.

>>

Why don't you just put it at a FTP site that has anonymous access. Now even
AOL gives FTP access ... It would save us (or at least me) from DLing a long
file unless I want it).

- Chip Griffin aka Granite
- President of Thames River Apple Users Group
= Emmet2 (America Online)
= emmet2@aol.com (internet)
= N1MIE@N10KK.CT.USA (packet)
= 1:320/301 (fidonet)

From RRRROSS@aol.com Sun Jan 08 21:30:49 1995

Return-Path: <RRROSS@aol.com>

Received: from mail04.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRAoh-0000MQC; Sun, 8 Jan 95 21:30 CST

Received: by mail04.mail.aol.com

(1.38.193.5/16.2) id AA04109; Sun, 8 Jan 1995 22:27:38 -0500

Date: Sun, 8 Jan 1995 22:27:38 -0500

From: RRRROSS@aol.com

Message-Id: <950108222731_2976789@aol.com>

To: aprssig@tapr.org

Subject: subscribe

subscribe

From klarson@access.digex.net Mon Jan 09 03:22:21 1995

Return-Path: <klarson@access.digex.net>

Received: from access4.digex.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRGIt-00008kC; Mon, 9 Jan 95 03:22 CST

Received: by access4.digex.net id AA19926

(5.67b8/IDA-1.5 for aprssig@tapr.org); Mon, 9 Jan 1995 04:22:17 -0500

Date: Mon, 9 Jan 1995 04:22:16 -0500 (EST)

From: Kent Larson <klarson@access.digex.net>

To: aprssig@tapr.org

Cc: aprssig@tapr.org

Subject: Re: [APRSSIG:50] Re: Query on documentation

In-Reply-To: <199501061540.KAA14354@spectre.mitre.org>

Message-Id: <Pine.SUN.3.91.950109041923.19548A-100000@access4.digex.net>

Mime-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Steve,

Me and some others are planning on doing a few dog and pony shows in the Northern Virginia area and would like to look at your slides if you don't mind. Uuencoded Power Point files to me would be fine. I need to learn a little more about that type of encoding.

Thanks,

Kent

On Fri, 6 Jan 1995, Steve Schwarm wrote:

> I did a talk at a ham fest on how it works and I'd be glad to mail you a
> copy of the slides. They were done with Power Point. I could send you a
> post script output, the power point file uuencoded or paper copy by the
> post office.

>

> Stephen(Steve) Schwarm, W3EVE

> Principal

> The MITRE Corp.

> 202 Burlington Rd MS B155

> Bedford, MA 01730

> (617)271-4600

> FAX: (617)271-4686

> Schwarm@mitre.org

> Packet: W3EVE @ K1UGM.#EMA.MA.USA.NA

>

>

From gjones@tenet.edu Mon Jan 09 03:55:12 1995

Return-Path: <gjones@tenet.edu>

Received: from Alice-Thurman.tenet.edu by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRGof-0000pQC; Mon, 9 Jan 95 03:55 CST

Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.9/8.6.9) id

DAA10676 for aprssig@tapr.org; Mon, 9 Jan 1995 03:55:08 -0600
From: Greg Jones <gjones@tenet.edu>
Message-Id: <199501090955.DAA10676@Alice-Thurman.tenet.edu>
Subject: Re: [APRSSIG:59] Re: Query on documentation
To: aprssig@tapr.org
Date: Mon, 9 Jan 1995 03:55:08 -0600 (CST)
In-Reply-To: <Pine.SUN.3.91.950109041923.19548A-100000@access4.digex.net> from
"Kent Larson" at Jan 9, 95 03:23:00 am
X-Mailer: ELM [version 2.4 PL23]
Content-Type: text
Content-Length: 1521

Why don't you leave them on the current TAPR ftp area (until the move in the next few weeks). anonymous login to TCET.UNT.EDU. Under tapr/UPLOAD

When we make the move, we can then put them in the APRSSIG area on TAPR.ORG. Each of the SIGs will have an ftp are on the new system.

Cheers - Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu

According to Kent Larson:

>
> Hi Steve,
>
> Me and some others are planning on doing a few dog and pony shows in the
> Northern Virginia area and would like to look at your slides if you don't
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> > Stephen(Steve) Schwarm, W3EVE
> > Principal
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> > FAX: (617)271-4686
> > Schwarm@mitre.org
> > Packet: W3EVE @ K1UGM.#EMA.MA.USA.NA
> >
> >
>

From Gregory.R.Laborde@jpl.nasa.gov Mon Jan 09 12:10:10 1995
Return-Path: <Gregory.R.Laborde@jpl.nasa.gov>
Received: from hafgan-fddi.jpl.nasa.gov by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rROXZ-0000pvC; Mon, 9 Jan 95 12:10 CST
Received: from kilroy.jpl.nasa.gov by hafgan.jpl.nasa.gov; Mon, 9 Jan 95 10:08:33
-0700
Received: from [128.149.100.84] (kd6msm.jpl.nasa.gov) by kilroy.Jpl.Nasa.Gov (4.1/
SMI-4.1+DXRs2.3)
id AA27442; Mon, 9 Jan 95 10:08:04 PST
Date: Mon, 9 Jan 95 10:08:01 PST
Message-Id: <9501091808.AA27442@kilroy.Jpl.Nasa.Gov>
X-Sender: laborde@128.149.63.2
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: aprssig@tapr.org
From: Gregory.R.Laborde@jpl.nasa.gov (Gregory R. LaBorde)
Subject: Running APRS

OK, here is my situation. I use a Kantronics KPC-9612 with KaGOLD software on a 386DX/40. I usually leave my computer on with KaGOLD running. When I exit KaGOLD, the TNC is left in host mode for a fast startup when I restart KaGOLD.

What do I need to do to run APRS without scrambling my TNC's parameters so that I can go between the two. I _can_ set KaGOLD to put the KPC-9612 in command mode when it exits.

I am interested in APRS, but not at the cost of confusion in my main operating mode.

Also, can APRS be run on an HP200LX (with a KPC-3)?

-Greg

--

Gregory R. LaBorde - KD6MSM	Internet: laborde@kilroy.jpl.nasa.gov
Jet Propulsion Laboratory	AMPRNet : kd6msm@jpl-gw.w6vio.ampr.org
Systems Engineering - Galileo OET	Packet : KD6MSM@W6VIO.#SOCA.CA.USA.NA
M/S 264-805 4800 Oak Grove Drive	Phone : (818) 393-1107
Pasadena, CA 91109	

From mmunster@qualcomm.com Mon Jan 09 16:32:39 1995
Return-Path: <mmunster@qualcomm.com>
Received: from happy.qualcomm.com by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rRSdh-0001H4C; Mon, 9 Jan 95 16:32 CST
Received: from [129.46.12.181] (mmunster-mac.qualcomm.com [129.46.12.181]) by
happy.qualcomm.com (8.6.9/QC-BSD-2.5) with SMTP id OAA27576 for
<aprssig@tapr.org>; Mon, 9 Jan 1995 14:32:32 -0800
X-Sender: mmunster@happy
Message-Id: <ab376998180210046d28@[129.46.12.181]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Mon, 9 Jan 1995 14:32:42 -0800
To: aprssig@tapr.org
From: mmunster@qualcomm.com (Marvin Munster x5388)
Subject: Re: [APRSSIG:60]Running APRS63b

I downloaded all of the files from the FTP site and unzipped them. When I
ran them, the program started, and I filled in all of the questions. When
completed, it locked up and beeped at me. It said -Bad #! Check your
APRS subdirectories.

Does anyone know anything about this? I am not sure where to go from here.
The version is APRS63b. APRS62b acted the same way.
Thanks in advance.
Marvin - WB6PKK
mmunster@qualcomm.com

From janderson@ram.net Mon Jan 09 17:58:30 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRTyj-00007vC; Mon, 9 Jan 95 17:58 CST
Received: by ram.net (5.65/1.2-eef)
id AA22411; Mon, 9 Jan 95 18:51:47 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:62] Re: unning APRS63b
Date: Mon, 09 Jan 95 18:55:18 EST
Message-Id: <02074.15021591@RAMail>
Version: RAMail 2.8h
Location: RAM HEADQUARTERS (207) WOODBRIDGE, NJ

>Does anyone know anything about this? I am not sure where to go from here.
>The version is APRS63b. APRS62b acted the same way.
>Thanks in advance.
>Marvin - WB6PKK
>mmunster@qualcomm.com

If you use PKUNZIP -d APRSXXX.ZIP it will make its own subdirs and put the
files in the right place.

MD APRS
CD APRS
PKUNZIP -d <path>APRS63B.ZIP

This should do it...

Jack

N4ULS@ram.net

From akasbb1@peabody.sct.ucarb.com Tue Jan 10 12:21:47 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rR1CR-0000uRC; Tue, 10 Jan 95 12:21 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA10150; Tue, 10 Jan 1995 13:22:48 -0500
Message-Id: <9501101822.AA10150@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Tue, 10 Jan 1995 13:20:57 -0500
To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: APRSSIG Update

The TAPR APRS SIG is less than a month old. It has a subscriber list of just about 100 people, a couple of which are actually 'groups' of people at other sites.

Since the introduction of this SIG, there has been over 60 messages, Not bad for a group that just started...

As of yesterday, we now have Bob Bruninga, WB4APR, on this list too. I would like to welcome him to the TAPR APRS SIG. Bob is new to Internet E-Mail so I am not going to give his address out until he gets a little more comfortable with accessing his system.

Bob will be making version announcements etc via the APRS-SIG list server and will try to answer questions as they come in. At least for the moment, I do not expect him to check his E-Mail everyday, so don't be surprised if you don't get an immediate response from him.

I would like to thank TAPR for their enthusiastic support for this SIG and their rapid response to the couple minor problems that we have had with the ListServer.

I would also like to announce that I will be at the TAPR general meeting in March in St Louis, MO and will be presenting a paper about some of the enhancements to and interesting applications of APRS.

I will also be at the APRS/Skywarn/WX-Balloon mini-conference in Chicago on SuperBowl Sunday. (January 29) This is at the Wheaton Hamfest in Villa Park IL (Western suburb of Chicago). It is being held at the Odeum in Villa Park.

If you are going to be at either of these events, please look me up.

Keith Sproul, WU2Z, TAPR APRS SIG Chairman

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb4cyc.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From bruninga@greatlakes.nadn.navy.mil Tue Jan 10 13:59:17 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRmhq-0001E2C; Tue, 10 Jan 95 13:58 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA08276; Tue, 10 Jan 95 14:56:05 EST
Date: Tue, 10 Jan 1995 14:56:04 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:62] Re: unning APRS63b
In-Reply-To: <ab376998180210046d28@[129.46.12.181]>
Message-Id: <Pine.SUN.3.91.950110145038.7721E-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I suspec the problem is that he tied to use COM3-4. Version 63b was my firrst attempt at supporting COM3-4. I did it the only way permissible under Qbasic, and that was to simply POKE the hardware location of COM3 into the BIOS location for COM1 (similar for 4 & 2). I have all of my serial devices swithc selectible from COM1, so I have no way of testing this approach. I assume that for this to work, that the user must have set the SAME interrupts for both COM3 and COM1 or for COM4 and COM2.

Thats why the SELECT PORT prompt reads: COM (1, 2, or 3/4 maybe)
I dont een have enuff room in APRS to follow up with an additional line of explanation! (When I tear apart the code and rebuild it, I should be able to find some more room)!

On Mon, 9 Jan 1995, Marvin Munster x5388 wrote:

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> Marvin - WB6PKK

> mmunster@qualcomm.com

>

>

>

From little@nuts2u.enet.dec.com Tue Jan 10 17:57:00 1995

Return-Path: <little@nuts2u.enet.dec.com>

Received: from inet-gw-1.pa.dec.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRqQj-0001JgC; Tue, 10 Jan 95 17:56 CST

Received: from us2rmc.zko.dec.com by inet-gw-1.pa.dec.com (5.65/10Aug94)
id AA03959; Tue, 10 Jan 95 14:03:16 -0800

Received: from nuts2u.enet by us2rmc.zko.dec.com (5.65/rmc-22feb94)
id AA28733; Tue, 10 Jan 95 16:51:52 -0500

Message-Id: <9501102151.AA28733@us2rmc.zko.dec.com>

Received: from nuts2u.enet; by us2rmc.enet; Tue, 10 Jan 95 17:02:37 EST

Date: Tue, 10 Jan 95 17:02:37 EST

From: "Todd Little, Pegasus" <little@nuts2u.enet.dec.com>

To: aprssig@tapr.org

Cc: little@nuts2u.enet.dec.com

Apparently-To: aprssig@tapr.org

Subject: Windows version of APRS?

Has there been any discussion/plans/whatever of a Windows based version of APRS? I personally like to use my computer for lots of things and having it tied up with APRS makes it a bit of a pain. Also I usually run Windows NT and although APRS runs in a DOS window under NT, it requires a full screen window as I'm guessing it does direct video access of some sort.

73,

Todd

N9MWB

From mmunster@qualcomm.com Tue Jan 10 18:20:49 1995

Return-Path: <mmunster@qualcomm.com>

Received: from happy.qualcomm.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRqnv-0001LsC; Tue, 10 Jan 95 18:20 CST

Received: from [129.46.12.181] (munster-mac.qualcomm.com [129.46.12.181]) by
happy.qualcomm.com (8.6.9/QC-BSD-2.5) with SMTP id QAA18042 for
<aprssig@tapr.org>; Tue, 10 Jan 1995 16:20:44 -0800

X-Sender: mmunster@happy

Message-Id: <ab38d3ea1d0210048c58@[129.46.12.181]>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Tue, 10 Jan 1995 16:20:58 -0800

To: aprssig@tapr.org

From: mmunster@qualcomm.com (Marvin Munster x5388)

Subject: Re: [APRSSIG:65] Re: unning APRS63b

Thanks to everyone for their help. I have solved the problem. Just like everyone else, I was in a hurry to view the product, and didn't read all of

the documentation that is provided. In an obscure little file there is a statement that when unzipping the file, be sure to use the -d parameter. This will restore all of the needed subdirectories in their proper places. Now I know. I am still having a little trouble understanding the "demo" documentation. It doesn't all work as advertised, or again, I haven't found all the little clues that come from behind the fifth door on the left, on the third level, in the great hall of DOOM.

Thanks again.
Marvin - WB6PKK

```
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>> Marvin - WB6PKK
>> mmunster@qualcomm.com
>>
>>
>>
```

From robertgm@romulus.ncsc.mil Tue Jan 10 21:35:32 1995
Return-Path: <robertgm@romulus.ncsc.mil>
Received: from romulus.ncsc.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRtqN-0001TzC; Tue, 10 Jan 95 21:35 CST
Received: (from robertgm@localhost) by romulus.ncsc.mil (8.6.9/8.6.6) id WAA19867
for aprssig@tapr.org; Tue, 10 Jan 1995 22:34:35 -0500
Date: Tue, 10 Jan 1995 22:34:35 -0500
From: "Robert G. Mahoney" <robertgm@romulus.ncsc.mil>
Message-Id: <199501110334.WAA19867@romulus.ncsc.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:66] Windows version of APRS?

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I received OS2 WARP from Santa and loaded it about a week ago. Once I figured out what the launch pad was all about the first thing I did was to fly APRS version 6.2a in a DOS then later in an OS2 window. APRS ran fine in both cases and I was able to minimize the window and for 30 minutes I played the Windows 3.1 game of solitaire and cleaned up my hard drive. The whole time I was tending to other business the computer kept beeping in its different tones as APRS continued to crunch the TNC inputs. I also continued to transmit reports periodically. When I finished playing I opened up the APRS window and all the different lists grew and new stations had been plotted. Everything looked great. The bottom line is that as far as I can tell WARP worked great if you don't want to have APRS dominate your computer. I have since repeated the success with version 6.3b of APRS.

de WB8CXN/3 Bob Temporary Annapolis, MD
From gjones@tenet.edu Tue Jan 10 23:44:52 1995
Return-Path: <gjones@tenet.edu>
Received: from Alice-Thurman.tenet.edu by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rRvrP-0001RSC; Tue, 10 Jan 95 23:44 CST
Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.9/8.6.9) id
XAA02398; Tue, 10 Jan 1995 23:44:40 -0600
From: Greg Jones <gjones@tenet.edu>
Message-Id: <199501110544.XAA02398@Alice-Thurman.tenet.edu>
Subject: TNC-2 1.1.9 Firmware Announcement
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (APRS SIG)
Date: Tue, 10 Jan 1995 23:44:39 -0600 (CST)
X-Mailer: ELM [version 2.4 PL23]
Content-Type: text
Content-Length: 5173

TAPR TNC-2 Release 1.1.9

Tuesday, January 10th, 1995

TAPR is proud to announce the release of version 1.1.9 for the TNC-2. 1.1.9 EPROMS with command booklet will be available from the office starting January 10th, 1995. 1.1.9 will replace the current 1.1.8a being distributed by TAPR.

Release 1.1.9 incorporates these new features:

- o - Modified P-Persistence
- o - Enhanced monitor mode filtering
- o - Support for Dallas Semiconductor RSmartwatchS (tm) socket

- o - NMEA beaconing mode
- o - CW identification in FSK using the onboard packet modem

And these changes:

- o - The pound sign ASCII character "#" is allowed in callsigns
- o - The "OUT" command installed in version 1.1.8 is removed
- o - In addition to identification at 9.5 minute intervals, the HID function transmits an identification packet upon incoming connect acknowledge, outgoing connect attempt success, disconnection, and cancellation of outgoing connect attempts.
- o - DWAIT is now applied to digipeated and non-digipeated packets
- o - Delay equivalent to the current DCD backoff time is applied after transmit release to prevent multiple transmissions with extremely small delays in between

NMEA Beacon Function

=====

TNC-2 now incorporates a dedicated mode enabling the broadcast of one or two NMEA version 2.00 (and compatible) sentences to the UNPROTO address. When placed in NMEA mode with a non-zero value in the NMEABCN parameter, the TNC broadcasts the most recently received sentences received from the attached NMEA talker on the radio link. No other outgoing transmissions are permitted with the exception of identification, beacon, CTEXT, and mailbox data (*if supported).

NMEA devices provide an ASCII output at 4800 baud, 8/N/1, consisting of one or more types of sentences containing various types of data. Most commonly these data contain navigation fixes. For example, the authorUs global positioning system receiver (Garmin model GPS-55AVD) generates sentences containing the receiverUs longitude and latitude (fix), time of the fix, groundspeed, waypoint data, and the like.

An example:

```
$GPRMC,034523,Y,02754.31,N,08023.03,W,1.5,035,031294,4,W*23<cr><lf>
```

Meaning:

R\$GPRMCS - Indicates the type of data (RMC-minimum recommended GPS sentence)

034523 - UTC hh/mm/ss

Y - data valid

02754.31,N - longitude

08023.03,W - latitude

1.5 - groundspeed

035 - Track made good over the ground (degrees true)

031294 - date ddmmyy

4,W - magnetic variation, West

23 - checksum (ignored by the TNC)

(Note that this example sentence was not actually generated by the unit and the checksum is probably wrong)

Modified P-Persistence

=====

P-persistence is a channel sharing technique that has gained great favor in the TCP/IP world. A modified form of P-persistence It is now included in TAPR TNC-2 as an alternative to prioritized acknowledgements and DWAIT.

Modified P-persistence relies on two principles to achieve a more equitable sharing of the common frequency. First, when the TNC waits a random multiple of DWAIT after hearing another station before it transmits. The upper limit of the random value is user defined by the PERSIST parameter to prevent frequency monopolization by stations placing unusually heavy demands on the frequency, as with the case of a file transfer. Modified P-persistence increases the likelihood that a station with higher priority traffic can acquire the channel.

The second way modified P-persistence promotes channel sharing is by gradually increasing the wait time when the TNC executes retry transmissions.

Modified P-persistence as implemented in TNC-2 differs from standard P-persistence in that acknowledged retries do not cause the time delays to cumulate. After a retry is successfully acknowledged the TNC reverts to the shorter delay that assumes a perfect channel. Another difference is that the retry delay is applied only to connections on stream A.

Monitoring Improvement

=====

The TNC will examine the contents of each monitored packet for nonprinting ASCII characters and discard the entire packet if at least one is detected. Nonprinting characters means any ASCII character less than the space character except for BELL, LF, and CR, and the DEL character. The test occurs after masking off the high order bit. By setting MNONPRIN to OFF, and in concert with MNONAX25 OFF, the TNC will filter nearly all screen-garbage inducing monitored packets.

The 1.1.9 TNC-2 executable is (c) 1994 InfoMotion, Inc. All rights reserved.

TNC-2 firmware is provided "AS-IS" AND THE USER ASSUMES THE ENTIRE RISK OF UTILIZING THE FIRMWARE. TNC-2 FIRMWARE IS NOT INTENDED NOR IS IT PROVIDED FOR ANY PURPOSE, INCLUDING NAVIGATION, WHEN FAILURE OF THE FIRMWARE, OR HARDWARE, OR BOTH, MIGHT CAUSE BODILY INJURY OR LOSS OF PROPERTY.

Tucson Amateur Packet Radio

8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
Office: (817) 383-0000 * Fax: (817) 566-2544 * TAPR@TAPR.ORG

From ROBERTST@BENNING-EMH1.ARMY.MIL Wed Jan 11 07:35:18 1995
Return-Path: <ROBERTST@BENNING-EMH1.ARMY.MIL>
Received: from BENNING-EMH1.ARMY.MIL by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rS3Ck-0000TIC; Wed, 11 Jan 95 07:35 CST
Message-Id: <m0rS3Ck-0000TIC@dptspd.sat.datapoint.com>
Received: from BEN1 by BENNING-EMH1.ARMY.MIL (IBM VM SMTP V2R2)
with BSMTMP id 8230; Wed, 11 Jan 95 08:33:38 EST
Comments: Converted from PROFS to RFC822 format by PUMP V2.2X
Date: Wed, 11 Jan 95 08:33:25 EST
From: <ROBERTST@BENNING-EMH1.ARMY.MIL>
Subject: Ultimeter-II
To: <aprssig@tapr.org>

In reading thru the documentation that comes with APRS one of the articles mentions using the Ultimeter and a TNC as a stand alone WX station. I hooked the TNC and Ultimeter up as stated and sure enough the Beacon contains data from the Ultimeter. Unfortunately the info is just a string of numbers similar to *0007600000000 or something thereabouts. When I use the WX option of APRS it works fine so I can only assume that APRS decodes this info into meaningful data. All this said and done how can you use the TNC and Ultimeter as a remote weather station if the Beacon Text does not contain the decoded WX info? I have also successfully used the AUTOWX program to transmit the weather data in an APRS accepted format however this requires a dedicated computer also. Hopefully I have overlooked something and someone can help me out.

From schwarm@spectre.mitre.org Wed Jan 11 11:39:31 1995
Return-Path: <schwarm@spectre.mitre.org>
Received: from mbunix.mitre.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rS714-0000p9C; Wed, 11 Jan 95 11:39 CST
Received: from spectre.mitre.org (spectre.mitre.org [129.83.61.124]) by
mbunix.mitre.org (8.6.9/8.6.9) with ESMTP id MAA17811 for <aprssig@tapr.org>; Wed,
11 Jan 1995 12:39:22 -0500
Received: from localhost (schwarm@localhost) by spectre.mitre.org (8.6.4/8.6.4) id
MAA28863 for aprssig@tapr.org; Wed, 11 Jan 1995 12:39:22 -0500
Date: Wed, 11 Jan 1995 12:39:22 -0500
From: Steve Schwarm <schwarm@spectre.mitre.org>
Message-Id: <199501111739.MAA28863@spectre.mitre.org>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:59] Re: Query on documentation

Here the presentation is. It is a uuencoded power point file. If you would like the post script let me know. You may use it for any not for profit activity.

Stephen(Steve) Schwarm, W3EVE
Principal
The MITRE Corp.
202 Burlington Rd MS B155
Bedford, MA 01730

Home:
30 Hayden Woods
Wrentham, MA 02093-1282

(617)271-4600
FAX: (617)271-4686
Schwarm@mitre.org

(508)384-7697
Packet: W3EVE @ K1UGM.#EMA.MA.USA.NA

begin 644 APRS.PPT

M"ZW>[0 , > ("@ .8X 4 !_ @ & !!Z ! \$
M-H 1V@ !': &8 \$=H "8 8.@ 0 !C2
M &=(9T@ 8 !G2 F &U(" ;Z@ & !QJ
M ! ',H =R@ !W* *6 '<H "8 H(@ (
M"BZ 8 *3H \$ IF@ "J: *IH N(JF@
M)@ #8B @ -KH !@ W.@ 0 #>: .)H XF
M@ #6 #B: F 1?H " !&D@ & \$<2 ! 1W(
M !(<@ \$AR +" 2'("8 !3>@ (%02 8 5)(
M \$!4\@ %7R 5?(V0 !5\@)@ &." @ 9
M!H !@ !DF@ 0 &3Z 9?H !E^@ #, &7Z F
M <KH " !S4@ & '/2 ! =#(!U,@ '4R
M +Z =3("8 " !&@ ((&R 8 @C(\$ ""D@
M(.2 @Y(PH "#D@)@ (^Z @ D%(!@ "0T@
MO)\$R DC("2,@ "P@)(R F G3H " "=T
M@ L)Y2 6 H1(!@ "A:@ P *'* H I,H #@
M "E:@ #"@ *9* F LG(& "S"@ % +2* M-H
M ;X "TV@)@ +02 @ O&H !@ "\Z@ (+U* 4 0
M<H "^&@ E +X: F P&H " #! @ & ,&" @
M P>(!0 #"8@ ,*R "4 PK("8 #%"@ (,6:
M 2 QAH ! #&8@ &@ ,:B : QPH !H #'<@ -@
M,?: ! (R+(\$ #)T@ 7@ ,K2 !> S\$H "0 #-P@ \$
M\$@ ,Y2 B WIH 8 #?(@ # -\Z ' WVH P #?A
M@ \$ -^V , W_8 \ #@)@ # !B J X)(' @
M #A.@ -@ .,: ". X_ 54X @ "____P !P(# !
M@N#X./B,^P@*+ \$ 0\$! 0 " /_] !+2&\$ ""P/S@^(P(! HI 0 !
M 0\$! (__T \$M*F0 . 8(#@ 3@" ^%7XQOKK
M"?(@ D \$ P +S< _Z4 9 %H \$ 0
M# \$ & ' ! \$P @ /S]^,8'YPGO__\) !
M__\ /^E /__ &0 !: " \$!&075T;VUA=&EC
M(!A8VME="!297!0<G1I;F<@4WES=&5M#0U3=&5V92!38VAW87)M+"!7,T56
M10TR(\$]C=&]B97(@,3DY- , 1@ 0 P "(@ H \$ 0
M 6 ((! \$ #@ " !@ 0 ! 8 1@ < !
M "(1 6X , 2P ! %H ' @ ! \$0%N # \$L
M !: !X %1\$!;@ P!+ \$ 6@ > X1 6X
M , 2P ! %H ' @ \$ 0 " (0 ' _ "
M " Q @L#_</G0"9 & , \$ 0\$! 0 " /_] !+2;;,
M\$! P/9P^F#^X 6@ 0 ! 0\$! (__T \$ #G__
M#@ 3 " _XWZ"@ES!?8 @ , 0 _Z4 9
M %H * 0 # \$ & ')
M!@ " (0 ! #_ ! ' " \$*"10 !0
M H!"R\ 0 " +____ ' , \$ ""
MX/@X^(S[" HL 0 ! 0\$! (__T \$M+<00 (+ _.#XC @\$"BD! \$!
M 0\$ @ #__0 2TJ4 X "4@ . !. (#X5?C&^NL)
M\O__ !@ ?__ %'_;@#__P!+ ! 6@ > ! "\$]V
M97)V:65W P (! ! " " "0 0 # 8 " <

M 0 @ _Z4 9 %H (! \$ P @ /S]^,8'YPGO
M__\) !__\ /^E /__ &0 !: # \$ " ?5&AI
M<R! I<R! N; W0@; 7D@=V] R: PU4: &4@<V] F='=A<F4@=V% S('=R: 71T96X@86YD
M(&ES(&UA: 6YT86EN960@8GD-0F]"(\$) I; FEN9V\$ L(%="-\$%04B -5VAA="! I
M<R! I=#\ -2&] W(&ET(&-A; B! B92! U<V5D#5=H870@>6] U(&YE960@=&\@=7-E
M(&ET#4A0=R! I="! W; W) K<PU\$96UO , GP 0 P !0 @ 8 \$
M 0 !# (\$@ ! \$ 2 " !@ 0 ! 8 GP <
M " !11 6X , 2P %H '@ N '0 &0
M \$!: !X %0 !T !D ! 6@ >
M Q1 6X , 2P %H '@ 340%N # \$L
M !: !X &%\$!;@ P!+ 6@ > U1 6X
M , 2P %H '@ \$40%N # \$L !: !X
M \$ T @ " \$!\&0 @!D 0\$! X< #@ \!"A,<
M # !\$ \$! @ "____P !P
M# ! @N#X./B,^P@*+ \$ 0\$! 0 " /_] !+20D\$ ""P/S@
M^(P(! HI 0 ! 0\$! (__T \$M* P . F(#@ 3@"
M ^%7XQOKK"?+_P 8 ' __P !1_VX __\ 2P 0 %H '@
M 0 M7:&%T(&ES(&ET/V # L \$ \$ + () ! ,
M !@ + !P ! "P#_I0 !D 6@ P \$
M3 " _/WXQ@?G">__P D ' __P _Z4 __\ 9 %H
M 0 0 0-!(&UE=&A09"!09B!B<F]A9&-A<W1I;F<@:6YF;W)M871I
M;VX@;VX@2&%M('!A8VME="!N971W;W)K<PU0<FEM87)I;'D ('5S960@=&\@
M<V5N9"!L;V-A=&EO;@U#86X@86QS;R!B92!U<V5D('10(' -E;F0@#6-0=7)S
M92!A;F0@<W!E960-=V5A=&AE<B!I;F90<FUA=&EO;@U4:&4@:6YF;W)M871I
M;VX@:7,@9&ES<&QA>65D(&]N(&\$@;6%P(&]N(&\$@8V]M<'5T97(-5&AE(&EN
M9F]R;6%T:6]N(&-A;B!B92!L;V=G960@86YD('!L87EE9"!B86-K(&QA=&5R
M"@ , ! P 0 P #P @ 8 \$ 0 !@ (\$@ ! \$
M 9P " !@ 0 ! 8 ! P < !P #Q1 6X , 2P
M %H '@ A0 '0 &0 \$!: !X &D !
MT !D ! 6@ > !% <@ 9 @ %H
M'@ 40 '(&0 (!: !X -%\$!;@ P!+
M 6@ > #-1 6X , 2P %H '@
M 7 % " (0 'P2 " _____ 2H 5 %@\$*#@@ 3
M & 1\$ " +_____
M \$ ""X/@X^(S[" HL 0 ! 0\$! (__T \$M*6P0 (+ _.#XC @\$
M"BD! \$! 0\$ @ #__0 2TDN X ">@ . !. (#X
M5?C&^NL)\0__ !@ ?__ %'_;@#_P!+ ! 6@ > !
M \$DAO=R! I="!C86X@8F4@=7-E9 , \$@ 0 0 ! (@ D \$
M P & ! (' \$ 2 /^E &0 !: \$
M 1, (#_?C&!^<)[___ "0 ?__ #_I0#_P!D
M6@ !0 ! !1\$YE='=0<FL@=&]P;VQ09WD@;6]N:710<FEN9PU3:&]W
M(&Q08V%T:6]N(&]F(' -T871I;VYS(&%C=&EV92!0;B!A(&9R97%U96YC>0U3
M<&5C:6%L(&5V96YT('1R86-K97(0;W)G86YI>F5R#5=I;&P@<W5P<&]R="!A
M=710;6%T:6,@:6YT97)F86-E('=I=&@082!'4%,@<F5C96EV97(@9F]R(&Q0
M8V%T:6]N " !R97!0<G1I;F<-2&%V92!A(')E86PM=&EM92!A=710;6%T:6,@
M9&ES<&QA>2!09B!L;V-A=&EO;B!09B!K97D@=F5H:6-L97, #4)08700;6]B
M:6QE+U)6('1R86-K97(-075T;VUA=&EC86QL>2!R96-0<F0@=VAE<F4@>6]U
M('=E<F4@;VX@>6]U<B!V86-A=&EO;@ , !1 0 !@ !P @ 8 \$
M 0 P (\$@ ! \$ (" !@ 0 ! (T @ 2
M \$ 0 7 (& ! \$ - " ! (0 ! 8 !
M1 < !P !Q1 6X , 2P %H '@ P0 '0
M &0 \$!: !X (%\$!;@ P!+ 6@ >
M \$U = 9 0 %H '@ ! 0 '0 &0

M \$!: !X %U\$!;@ P!+ 6@ > #1
M = 9 0 %H '@ > &P " (0 'P "
M "0 8 < '0\$*#B : 'P 0(
M " +----- ' , \$ ""X/@X^(S[" HL 0 ! 0\$!
M (__T \$M*[0 (+ _.#XC @\$"BD! \$! 0\$ @ #__0 2TA
M/ X ">@ . !. (#X5?C&^NL)\O__ !@ ?__ %'_
M;@#__P!+ ! 6@ > ! \$DAO=R!I="!C86X@8F4@=7-E
M9 , \$@ 0 0 ! (@ D \$ P & ! (' \$ 2
M /^E &0 !: % 1, (#_?C&!^<)[___ "0
M ?__ #_I0#__P!D 6@ !@ ! SE=E871H97(@
M<F5P;W)T:6YG#7-U<'!0<G1S(')E<&]R=&EN9R!W96%T:&5R(&-O;F1I=&EO
M;@UC86X@8F4@875T;VUA=&EC('=I=&@86X@56QT:6UE=&5R+4E)#6-A;B!M
M86YU86QL>0 @<&QA8V4@<W10<FUS(&]N(&UA< U\$:7)E8W1I;VX@1FEN9&EN
M9PU3=&%T:6]N<R!C86X@<F5P;W)T(&)E87)I;F=S#7-09G1W87)E('=I;&P@
M<VAO=R!I;G1E<G-E8W1I;VX P #. ! \$ \$@ " !@ 0 !
M &T @ 2 \$ 0 2 (& ! \$ /0 " !(0 !
M 8 S@ < !P !!)1 6X , 2P %H '@
M E0 '0 &0 \$!: !X)D !T !D !
M 6@ > ") = 9 0 %H '@ 240%N
M # \$L !: !X '4 !T !D ! 6@ >
M " ! = 9 0 %H '@ E (@ " (
M 0 'Q0P " _____=VD C) \$*%3 A)@
M 1(" +----- ' , \$ ""X/@X^(S[
M" HL 0 ! 0\$! (__T \$M(4@0 (+ _.#XC @\$"BD! \$! 0\$ @
M #__0 2TN, X "D@ . !. (#X5?C&^NL)\O__ !@
M ?__ %'_;@#__P!+ ! 6@ > ! %U=H870@>6]U
M(&YE960@=&\@=7-E(&ET(, %P 0 0 !< @ D \$ P
M& !< ' \$ 7 /^E &0 !: & 1, (
M #_?C&!^<)[___ "0 ?__ #_I0#__P!D 6@
M!P ! ! \$4UA;G5A;"!L;V-A=&EO;@U\$=6UB('!E<FUI;F%L+"!M87 L(%1.
M0R!A;F0@<F%D:6\ -0V]M<'5T97(L(%1.0R!A;F0@<F%D:6\ -075T;VUA=&EC
M(&Q08V%T:6]N<R!R97!0<G1I;F<-1U!3+"!004-#3TT@5\$Y#('=I=&@@=F5R
M<VEO;B S+C(@9FER;7=A<F4@86YD(')A9&EO#4=04RP@8V]M<'5T97(L(%1.
M0R!A;F0@<F%D:6\ -075T;VUA=&EC('=E871H97(@<F5P;W)T:6YG#55L=&EM
M971E<BU)22P@8V]M<'5T97(@86YD(')A9&EO#55L=&EM971E<BU)22P@5\$Y#
M(&%N9"!R861I;P # 1\$ \$ 8 0 (& ! \$.@ "
M !(0 ! !X @ 8 \$ 0 !1 (\$@ ! \$
M' " !@ 0 ! #P @ 2 \$ 0 & 1\$ ' D 0
M40%N # \$L !: !X (D !T !D !
M6@ > !A = 9 0 %H '@ >40%N #
M \$L !: !X -\$!T !D ! 6@ >
M !U = 9 0 %H '@ <40%N # \$L
M !: !X (4 !T !D ! 6@ > !M
M = 9 0 %H '@ L *0 " (0 'P "
M "0 8 J *P\$*#I0 H +0 0,
M " +----- ' , \$ ""X/@X^(S[" HL 0 ! 0\$!
M (__T \$*"[0 (+ _.#XC @\$"BD! \$! 0\$ @ #__0 0H5
M4 X "8@ . !. (#X5?C&^NL)\O__ "0 ?__ #_
MI0#__P!D 6@ ! # \$A0=R!I="!W;W)K<P ,
M# 0 0 P @ D \$ P & P ' \$, /^E
M &0 !: ' 1, (#_?C&!^<)[___ !(?__
M \$#_T #__P!D ! 6@ > ! !D)E86-0;B!T97AT(&90
M<FUA=" H;&]C871I;VX (&5X86UP;&4I#4)4(" %\$1\$U-+GAX3B]\$1\$1-32YX

M>%<O+BXN8V]M;65N=',-54D@9G)A;65S#75S92!5;G!R;W10('10('-E="!D
M:6=I('!A=&@-861D<F5S<R!T;R!!4%)3("AD;R!N;W0@8V]N;F5C="D-<'5T
M(&EN=&\@0T].5D524T4@;6]D92 H0V]N=B!O<B!+(&-O;6UA;F0I#4EG;F]R
M97,@86QL(&%D9')E<W,@8G5T#4E\$+"!#42P@45-4+"!"14%#3TXL(\$U!24PL
M(%-+65=23BP@1\$9.150@86YD(\$%04E, # 08 \$ 8 G (& !
M \$ (P " !(0 ! H @ 8 \$ 0 !I (
M\$@ ! \$ & " !@ 0 ! # \$ @ 2 \$ 0 &
M 08 ' @ G40%N # \$ L !: !X (T !T
M !D ! 6@ > I1 6X , 2P %H '@
M =0 '0 &0 \$!: !X (4 !T !D
M ! 6@ > "M = 9 0 %H '@ 8
M40%N # \$ L !: !X ,4 !T !D !
M6@ > #, P (@ ! ? () !@ # \$ R
M 0H/: "\ T !!0 (0____\
M < P 0 (+@^#CXC/L("BP! \$! 0\$ @ #__0 2TLF!
M@L#X/B," 0**0\$ 0\$! 0 " /_] !+2!T #@): X
M \$X @ /A5^,;ZZPGR__\ & !__\ 4?]N /__ \$L \$!:
M !X \$)1F]R;6%T<R @6@ , "0 0 0 D @ D \$
M P & D ' \$)/^E &0 !: (
M 1, (#_?C&!^<)[___ "0 ?__ #_I0#_P!D
M6@ "0 !]B0@:7,@<WEM8F]L('10('-H;W<@#5!O<VET:6]N(')E
M<&]R=',-1FEX960@3&%T+\$Q0;CH@ (41\$34TN>'A.+T1\$1\$U-+GAX5R1C;VUM
M96YT<PU&:7AE9"! '<FED(%-Q.B!;6%AN;EUC;VUM96YT<PU&:7AE9"! '<FED
M(%-Q.B!;6%AN;GEY76-0;6UE;G1S#4U08FEL93H@0\$1\$2\$A-32]\$1\$U-+GAX
M3B]\$1\$1-32YX>%=<0U-%+U-01"\Y,%\$D8V]M;65N=',-0U-%(&ES(&-0=7)S
M90U34\$0@:7,@<W!E960-42!I<R!Q=6%L:71Y(#\$@=&\@. ,]@ 0
M @ "8 @ 8 \$ 0 #0 (\$@ ! \$!@ #V !P)
M %5\$!;@ P!+ 6@ > !%1 6X , 2P
M %H '@ L0 '0 &0 \$!: !X 'D !
MT !D ! 6@ > " ! = 9 0 %H
M '@ X0 '0 &0 \$!: !X #D !R !D
M " 6@ > U <@ 9 @ %H '@
M 30 '(&0 (!: !X .@ #< @ " \$!
M\04 0_____V-K . #D!"@L -@ #L
M \$8 @ "_____P !P # ! @N#X./B,^P@*+ \$
M 0\$! 0 " /_] !+2@(\$ ""P/S@^(P(! HI 0 ! 0\$! (___T
M \$M+'@ . E(#@ 3@" ^%7XQ0KK"?+__P D '___P
M _Z4 __\ 9 %H 0 A&W)M871S(,
M" 0 0 @ @ D \$ P & @ ' \$ (/^E
M &0 !:) 1, (#_?C&!^<)[___ !(?__
M \$#_T #_P!D ! 6@ > ! Y\$1&(\$)E87)I;F=S#2%\$
M1\$U-+GAX3B]\$1\$1-32YX>%=<,# P+S P,"]"4D<03F]1+T1&(&-O;6UE;G1S
M#4)21R!I<R!B96%R:6YG(&1E9W)E97,@=')U90U.,%\$@:7,@<75A;&ET>3L@
M3B!I<R!N=6UB97(@;V8@:&ET<SL@42!I<R!Q=6%L:71Y(#\$@=&\@. U"<F]A
M9&-A<W0-0\$1\$2\$A-32]M97-S86=E#4]B:F5C= U/0DI%0U@0\$1\$2\$A-32]\$
M1\$U-+GAX3B]\$1\$1-32YX>%<D0U-%+U-01"]#;VUM96YT<P , Y 0
M!@ P @ 8 \$ 0 "% (\$@ ! \$ "@ " !@ 0 !
M ! @ 2 \$ 0 ' (& ! \$,@ " !(
M 0 ! 8 Y < " Q1 6X , 2P %H '@
M P0 '0 &0 \$!: !X '\$!T !D
M ! 6@ > #E = 9 0 %H '@ *
M40%N # \$ L !: !X \$\$!T !D !
M6@ > =1 6X , 2P %H '@ R0 '0

M &0 \$!: !X 00 #X @ " \$!\04 0_____

M_V-K /P \$!"A+ /0 \$(\$9

M @ "_____P !P # ! @N#X./B,^P@*+ \$ 0\$! 0 "

M /_] !+2R8\$ ""P/S@^(P(! HI 0 ! 0\$! (__T \$M('0 .

M E(#@ 3@" ^%7XQOKK"?+_P 8 ' __P !1_VX __\

M2P 0 %H '@ 0 =&;W)M871S , !P 0 0

M < @ D \$ P & < ' \$ ' /^E &0

M !: * 1, (#_?C&!^<)[___ "0 ?__ #_I0#__P!D

M 6@ "P ! OU=E871H97(-0\$1\$2\$A-32]\$1\$U-+GAX

M3B]\$1\$1-32YX>%=?0U-%+U-01"]4,# W,R]2,# P+U=X4W1N#4-312!I<R!W

M:6YD(' -P965D#5-01"!I<R!W:6YD(' -P965D#51X>'@@:7,@=&5M< U2>'AX

M(&ES(')A:6X@:6X0:'(-1'AX>"!I<R!\$97<@4'0-4'AX>"!I<R!087)T:6-I

M<&%T:6]N(&EN+V1A>0U">'AX(\$)A<F\N(%!R97-S=7)E"@ , OP 0

M @ @ @ 8 \$ 0 "W (\$@ ! \$!@ "_ !P)

M "%\$!;@ P!+ 6@ > #1 = 9

M 0 %H '@ 20 '0 &0 \$!: !X \$D !

MT !D ! 6@ > U = 9 0 %H

M '@ 30 '0 &0 \$!: !X #T !T !D

M ! 6@ > !U = 9 0 %H '@

M 30 '0 &0 \$!: !X 2 \$4 @ " \$!

M\04 0_____V-K 1@ \$<!"@^D 1 \$D

M \$6 * "@ ! 0 +

M \$@ !D @

M)P "X U

M / \$, @ "

M !*(%H 2P ! H \$: 0H1Y 54X @ " !P(#

M " 1(-# [Y_95"&@+. \$ 08 !P & 0H05 \$*\$" (!\$@T/E]E4(

M: LW 0 !!@ ' 8!"A', 0H+3 0 (+@^#CXC/L("BP! \$! 0\$ @

M #__0 0H0J! @L#X/B," 0**0\$ 0\$! 0 " /_] !"A5X\$ "%

MP >K^'8(1?L 0 0 ! (__T \$* "<P0 (7 !ZL(Q@A%"CX! !

M \$ @ #__0 0H*3! 8UOP D 0 ! #_/_P\$ "C6_

M 0 /_P__ P ^^?V50AH"SC[YPLX^^?V50AH]E4 !0 ^4#V50AH

M"S<(:/0J^4#X*0E]E7[]?95^R4+-P 3P ' \$ \ "< @0 '

MR/BP""C^O__ !(?__ #_I0#__P!D 9 !

M *BAC*2!C;W!Y<FEG:'0@,3DY-" @4W1E<&AE;B!38VAW87)M+"!7,T56

M10 , *@ 0 0 "H @ * \$ 0 & "H ' \$ J

M /^E &0 !D "< @0 'R D ""@*!/__ !(

M ?__ #_I0#__P!D 9 ! !W!A9V4@ (R,0

M P ' ! ! !P " H 0 ! 8 !P < 0 <

M_Z4 9 &0 \$X @ /A5^,;ZZPGR__\) !

M__\ /^E /__ &0 !: \$ %5&ET;&4(P

M % ! ! !0 " "0 0 # 8 !0 < 0 4_Z4

M 9 %H \$!P @ /S]^,8'YPGO__\ #@ !__\

M 0/_0 /__ &0 0 !: !X \$ [0F]D>2!497AT#5-E

M8V]N9"! ,979E; U4:&ER9"! ,979E; U&;W5R=&@@3&5V96P-1FEF=&@@3&5V

M96R0 P [! # " @ " !@ 0 ! !D @ 2 \$ 0

M 8 (#@ ! \$!@ [!P % "E\$!;@ P!+

M 6@ > 0 U = 9 0 %H '@ ,

M0 '(&0 (!: !X #5\$#;@ P \ #

M6@ > M = 9 ! %H '@ !1 3@ &

M 8 0 " /_ " !/ 4! @L#_</GO"9 &, \$ \$

M 0 " /_] !+2BD\$ "DP HO_Q8*SP#J 0 ! 0\$! (!+2=0__T \$M

M)P00\$ #0]G#Z8/[@!: ! ! \$ @ #__0 " !I&#P T

M(0 < #< &)0 0)0 !8P @ I+_TT*LP"S__\ "P
M__\ "17 / ^5 /__ &0 0!D #(\$ '4&%G92 C(P
M#< \$ \$ ' # \$!@ ' !P ! !P#_
MIO 0!D \$ 6@ 3 " _XWZ"@ES!?!;_P , #_
M_P _Z4 __\ 9 ! %H * 0 #M";V1Y(%1E>'0-
M4V5C;VYD(\$QE=F5L#51H:7)D(\$QE=F5L#490=7)T:"!,979E; U&:69T:"!,
M979E; # #L \$ \$ [(# \$!@ [!P %
M "@#_IO !D 6@ H 0 T _Z4 9
M 0 %H * \$, / ^E &0 (!: "@ ! #0#_
MIO !D # 6@ H 0 L _Z4 9 ! %H
M* \$!6 4P # , 0 " ## ! !4 50\$*
M#8@ !- 4@ %<!"RU\ 0LN7 \$!53@ " ('
M @ , \$ "DP HO_Q8*SP#J 0 ! 0\$! (!+23H__T \$M).0@ :
M1@\ - "\$ ' W !@ <F0 "4 6, (*2_]-"K,
ML___ P /__ 92P#_E0#_P!D \$ 6@ ! !U!A
M9V4@ (R, P ' ! ! !P P ! 8 !P <
M 0 < _Z4 \$ 9 ! %H != 6@ ! \$?__
M_____ ! !; 7 \$*\$U !9 %X
M \$!53@ " (' @ , \$ "DP HO_Q8*SP#J
M 0 ! 0\$! (!+23P__T \$M)LP@ :1@\ - "\$ ' W !@
M ='4 "4 6, (*2_]-"K, L___ P /__ # (A@#_E0#_P!D
M \$ 6@ ! !U!A9V4@ (R/(P ' ! !
M!P P ! 8 !P < 0 < _Z4 \$ 9 !
M %H !D 80 ! \$?_____ ! !B
M8P\$*\$*0 !@ &4 *CT @ \$(N+6 !__P
M 0!"0; 9P\$C#E(!"0@8 0H1X ! (\$@ D "0 -@ V \$@ 2 ,"
M0 +0 &P 2 "T) \P#8 3L!(P) 1(!\$(C B,#-0,U
M!\$8\$1@ # B, (! 2+K &?_\ \$ 0KVY 2 :0
M , :@ # :P ":" ' "H *@ "6 F
M
M (H !M\ 'X /!\ #P?P ^/\ /_ \ #__@ __T /_ \
M 0 ! \$ 0 ! \$ 0 ! #__0 !D &0 9 \$! 0 .' #<5 \$
MSX < 6/_____P!9 21:)%HD6@ 60 !\$84>/6_WR
M #, *X4 #_SL 08H]@ %SMC.V,[8__T 9 !D &0! 0\$ #APW
M%0 !-* ' %C_____ \ 60 &VAS: '-H< %D V=L
M9VQG; !,S,S,S,S %D !<[8SMC.V(! 2+M9 #?_\ \$ 0KV
MT \$;P + < \$*\$10!"A'P 0H1' 3@ " 0 " 0 0 #
M " "0 0 # " "0 0 # " "0 0 # " "0
M 0 # #_IO !D 6@ 0 _Z4 9
M 0 %H \$ / ^E &0 (!: !
M #_IO !D # 6@ 0 _Z4 9 !
M %H \$ 1, (? (& ! \$ (\$@ ! \$ (\$
M\$@ ! \$ (#@ ! \$ (#@ ! \$ 40%N # \$L
M !: !X ! \$!T !D ! 6@ > !
M <@ 9 @ %H '@ 40-N # #P , !:
M !X \$!T !D \$ 6@ > \$P @!\
M @ , 0 @ , 0 @ , 0 @ , 0
M @ , 0 _Z4 9 %H * \$ / ^E
M &0 \$!: "@ ! #_IO !D " 6@ H
M 0 _Z4 9 P %H * \$ / ^E &0
M 0 !: "@ ! /__3 " 'P ! !@ ! !@ !
M ! !@ ! !@ ! !@ ! !@ ! %0!IO
M !D 9 4 !4 :4 9 0 &0 %

```

M      5 &E      &0      (      !D !0      %0!IO      !D
M      #      9 4      !4 :4      9      !      &0 %
M      #, ( ? ( $@ ! $      ( $@ ! $      ( $@ ! $      (
M$@ ! $      ( $@ ! $      / ^E      &0      !D
M      #_I0      !D      9      _Z4      9
M      &0      / ^E      &0      !D      #_
MI0      !D      9      0 !      $ $ @ @
M      P #      @      />?!4%R:6%L      =      %0      !D=E;F5V80      '8
M      __\ . ]4:6UE<R!.97<@4F]M86X      !X      4      .36]N;W1Y<&4@
M4V]R=',      !Z      ?7 '>      0$BZM0      !'__      ! $*^!@ %@      '4 !0
M '< 2P      'D (@      'L P      $@ 2      "V@(H_ ^'_X@+Y D8#1P4H _P
M @      $@ 2      "V@(H $      !D      0 ! 0$      !)P\      0 !
M      ( &0&0      !      0
M$P
M      !2 8#N 3X/>0], (< M ],#WD M "'      _J      #D
M3      &8      !8      7P      '[Y$/7H $      ! ( @ "      &@      !L
M      <0      &X      !S      <@      'P      %H 0X!#@%H      0      ??____\
3 "<0      =3/_ ^      8GP      # "ZW>[7P

```

end

From billh@INS.INFONET.NET Wed Jan 11 11:44:44 1995

Return-Path: <billh@INS.INFONET.NET>

Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rS768-0001BVC; Wed, 11 Jan 95 11:44 CST

Received: by INS.INFONET.NET (MX V4.1 AXP) id 30; Wed, 11 Jan 1995 11:46:04 CST

Date: Wed, 11 Jan 1995 11:46:04 CST

From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>

To: aprssig@tapr.org

Message-ID: <0098A4D1.60FD99DF.30@INS.INFONET.NET>

Subject: QTH of APRS6.3

Have looked under 128.54.16.7 or ucsd.edu in cd /hamradio/packet/tcpip/incoming
and cd /hamradio/packet/tcpip/incoming
or rather cd /hamradio/packet/aprs and no newer version than aprs6.2.

Is there another site it is posted at? I need it for my poor MS-DOS
friends.

TNX

73, Bill

From mmunster@qualcomm.com Wed Jan 11 13:37:24 1995

Return-Path: <mmunster@qualcomm.com>

Received: from happy.qualcomm.com by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rS8rA-0001NmC; Wed, 11 Jan 95 13:37 CST

Received: from [129.46.12.181] (mmunster-mac.qualcomm.com [129.46.12.181]) by

happy.qualcomm.com (8.6.9/QC-BSD-2.5) with SMTP id LAA23670 for

<aprssig@tapr.org>; Wed, 11 Jan 1995 11:37:15 -0800

X-Sender: mmunster@happy

Message-Id: <ab39e2d82102100437be@[129.46.12.181]>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Wed, 11 Jan 1995 11:37:16 -0800

To: aprssig@tapr.org

From: mmunster@qualcomm.com (Marvin Munster x5388)

Subject: Re:Davis Weather Monitor II

Does anyone know how to interface the Davis Instrument Weather Monitor II to an APRS system. I don't think it should have data coming out of it much different than the Ultimeter II. I noticed in the docs that there was some reason that the Davis could not be used. Something about not being able to supply source code. Do we really have to go into the thing that deep or do we just need the output of the unit defined. I spoke with Davis this morning, and they didn't seem to have a problem with defining the outputs. In fact, there is a software designers kit and disk available. I think it is \$99, but maybe a couple of us could chip in if the input/output could be defined for the APRS.

Just a thought.

Marvin - WB6PKK

mmunster@qualcomm.com

From acourt@ncc.uky.edu Wed Jan 11 13:44:06 1995

Return-Path: <acourt@ncc.uky.edu>

Received: from ncc.uky.edu by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rS8xe-0001P5C; Wed, 11 Jan 95 13:44 CST

Message-Id: <m0rS8xe-0001P5C@dptspd.sat.datapoint.com>

Subject: Re: [APRSSIG:72] QTH of APRS6.3

To: aprssig@tapr.org

Date: Wed, 11 Jan 95 14:41:52 EST

In-Reply-To: <0098A4D1.60FD99DF.30@INS.INFONET.NET>; from "John W." at Jan 11, 95 11:55 am

X-Mailer: ELM [version 2.3 PL11]

From: acourt@ncc.uky.edu

Sender: acourt@ncc.uky.edu

Version 6.3b for MSDOS is available by anonymous ftp at 140.174.180.1.

It takes a while, as I think this is a slip link and is limited to 14.4K.

73

--

Allan Courtney KD4DBN // Lexington, Kentucky // acourt@ncc.uky.edu

From bruninga@greatlakes.nadn.navy.mil Wed Jan 11 13:45:24 1995

Return-Path: <bruninga@greatlakes.nadn.navy.mil>

Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rS8yv-0001P5C; Wed, 11 Jan 95 13:45 CST

Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)

id AA19881; Wed, 11 Jan 95 14:45:18 EST

Date: Wed, 11 Jan 1995 14:45:17 -0500 (EST)

From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>

To: aprssig@tapr.org

Subject: Re: [APRSSIG:70] Ultimeter-II

In-Reply-To: <m0rS3Ck-0000TIC@dptspd.sat.datapoint.com>

Message-Id: <Pine.SUN.3.91.950111144156.19496B-100000@greatlakes.nadn.navy.mil>

Mime-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 11 Jan 1995 ROBERTST@BENNING-EMH1.ARMY.MIL wrote:

>I hooked the TNC and Ultimeter up as stated and sure enough the Beacon contains data
> from the Ultimeter. Unfortunately the info is just a string of numbers
> similar to *0007600000000 or something thereabouts. When I use the WX option
> of APRS it works fine so I can only assume that APRS decodes this info into
> meaningful data.

ANSWER: APRS decodes the raw data off the air! It doesnt have to be in the final APRS format. In order for APRS to know that the raw data is from an U-II, the remote TNC must have the WX symbol in its BText {_} and APRS will do the rest....

From bruninga@greatlakes.nadn.navy.mil Wed Jan 11 13:50:52 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rS94B-0001RvC; Wed, 11 Jan 95 13:50 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1) id AA19984; Wed, 11 Jan 95 14:50:32 EST
Date: Wed, 11 Jan 1995 14:50:32 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:73] Re:Davis Weather Monitor II
In-Reply-To: <ab39e2d82102100437be@[129.46.12.181]>
Message-Id: <Pine.SUN.3.91.950111144749.19496C-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I agree, If someone will just define for me what the data looks like, and what it means, then I will be happy to add it to APRS for decoding the DAVIS outputs. So far, no-one has figured it out. I dont have one, so I cant experiment. Should be simple to do. Hook it put to PROCOMM and record a file for a few minutes. I would hope it should be obvious from then. (Of course, APRS is stuck SIZE wise, and I have to go re-modularize the code to make more room, before I can add anything onther that 1 or 2 lines...)

From bruninga@greatlakes.nadn.navy.mil Wed Jan 11 14:01:55 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rS9Eq-00017HC; Wed, 11 Jan 95 14:01 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1) id AA20249; Wed, 11 Jan 95 15:01:39 EST
Date: Wed, 11 Jan 1995 15:01:39 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Cheap \$25 GPS!
Message-Id: <Pine.SUN.3.91.950111145208.19496D-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Not really.... But Today I am going around to the local YACHT clubs and BOAT yards and posting a sign reading something like this: OLD LORANS WANTED! Will pay up to \$25! etc....

If GPS is selling as hot as everyone says it is, then there should be lots of junk LORANS being scrapped. Most have NMEA output and are perfectly compatible with APRS. Why shell out \$450 for a GPS toy when you can have just as much fun with a LORAN doing the same thing!? Sure, LORAN is only going to be around till 1999, but by then, GPS will only cost \$25 hi hi... You can buy brand new LORAN units for \$150 on sale, so a used clunker should be worth about \$25 unless you really want one, then go ahead and offer \$50 hi hi.

A properly placed call to any of a number of trucking companies that are abandoning their LORAN trackers for GPS units should also find hundreds of units. A few months ago, an article in 73 mag wrote up such a cheap surplused LORAN and the guy was selling them for \$25. He had 100 of them...

JUST BE SURE THE UNIT OUTPUTS NMEA GLL and VTG.

de WB4APR

From janderson@ram.net Wed Jan 11 14:39:02 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rS9oq-0001SrC; Wed, 11 Jan 95 14:39 CST
Received: by ram.net (5.65/1.2-eef)
id AA18494; Wed, 11 Jan 95 15:32:24 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: WB4APR de N4ULS
Date: Wed, 11 Jan 95 15:36:29 EST
Message-Id: <02088.15021591@RAMail>
Version: RAMail 2.8h
Location: MARRIOTT (1559) BALTIMORE, MD

Bob, can you post your email address here or send it to N4ULS@ram.net? I need to contact you directly on email.

Thanks,

Jack

From janderson@ram.net Wed Jan 11 14:54:03 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSA3N-0001YmC; Wed, 11 Jan 95 14:54 CST
Received: by ram.net (5.65/1.2-eef)
id AA18644; Wed, 11 Jan 95 15:47:25 -0500
From: janderson@ram.net
To: aprssig@tapr.org

Subject: WB4APR de N4ULS
Date: Wed, 11 Jan 95 15:51:23 EST
Message-Id: <02092.15021591@RAMail>
Version: RAMail 2.8h
Location: GREENBELT (792) GREENBELT, MD

Bob, can you post your email address here or send it to N4ULS@ram.net? I need to contact you directly on email.

Thanks,

Jack

PS Whoops, N4ULS@ram.net isn't working. Use n4uls@ram.net or janderson@ram.net.

73

From Richard_Matthews@shsvsmtp.huntsville.sparta.com Wed Jan 11 15:29:05 1995
Return-Path: <Richard_Matthews@shsvsmtp.huntsville.sparta.com>
Received: from huntsville.sparta.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSAax-0001YTC; Wed, 11 Jan 95 15:28 CST
Received: from shsvsmtp.huntsville.sparta.com by huntsville.sparta.com (4.1/
hsv(940816dfr))
id AA10192; Wed, 11 Jan 95 15:26:35 CST
Received: from QuickMail by shsvsmtp.huntsville.sparta.com
id qm-00001; Wed, 11 Jan 1995 15:26:33 -0600
Message-Id: <199501111526333310@shsvsmtp.huntsville.sparta.com>
X-Mailer: InterCon Dispatcher/SMTP for QuickMail
X-Priority: 4
Date: Wed, 11 Jan 1995 15:26:33 -0600
From: Richard Matthews <Richard_Matthews@shsvsmtp.huntsville.sparta.com>
Subject: Freq?
To: aprs <aprssig@tapr.org>

I'm a newcomer to APRS and live in a rural area of Alabama. Should I look for a specific frequency for APRS activity or will it appear on local BS frequencies?

Also is there an easy way to change a PK-88 from KISS mode to command mode?

73 de WA4NWW@amsat.com

From bruninga@greatlakes.nadn.navy.mil Wed Jan 11 16:10:06 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSBDN-0001L5C; Wed, 11 Jan 95 16:08 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA20446; Wed, 11 Jan 95 15:12:18 EST
Date: Wed, 11 Jan 1995 15:12:18 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: APRS telemetry system
Message-Id: <Pine.SUN.3.91.950111150153.19496E-100000@greatlakes.nadn.navy.mil>

Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

TELEMETRY.txt 6.3 APRS TELEMETRY SYSTEM
 Using the Micro.Interface.Module (MIM)

NOTE: THIS INFORMATION IS PRELIMINARY, AND ALTHOUGH A PROTOTYPE IS WORKING FINE, N3MIM AND I ARE STILL FINE TUNING THE PROTOCOLS AND FINAL DESIGN
***** Maybe we will be finished by DAYTON??

Carl Wick, N3MIM, has developed a simple, yet powerful Micro.Interface Module that can be used as a single chip APRS telemetry system. Although the intent of his original design was to make a very simple, light-weight, throw-away module for experimental balloon flights, his design has now evolved into a very useful APRS packet tool. Using one of the single chip microprocessors, he has implemented a complete TNC (transmitter only) on a chip. This chip has four analog inputs, five digital bit inputs, a receive audio input (for propper CSMA operation) and outputs PTT and AX.25 audio. The only external components besides the sensors themselves, are a crystal and a transmitter. (As of today,he is adding a simple 100 mw xmtr too!). The chip even uses digital synthesis to generate the audio waveform! The chip pin-out follows:

Analog 2 --0	-----	0-- Analog 1
Analog 3 --0	M.I.M	0-- Analog 0
Rcv input --0		0-- Xtal
reset --0	AX.25	0-- Xtal
Gnd --0		0-- 5 volts
Input bit 0 --0	Telemetry	0-- AX.25 out
input bit 1 --0		0-- AX.25 out
input bit 2 --0	Chip	0-- Input bit 5
input bit 3 --0	-----	0-- Input bit 4

APRS TELEMETRY RECEIVING SYSTEM: Any telemetry system requires a table of equations and labels to make the values useable at the receiver site. The problem with most experimental telemetry systems, is that the receiver system must be tailored for every new application. In the case of a one-time balloon launch, (or any experiment assembled to meet a schedule) the equations are not usually available until just hours or minutes before launch. This means that it is next to impossible to distribute the equations and parameter definitions to a large number of tracking stations and to be able to have receiving telemetry software ready to go.

For this reason, APRS has been designed to serve as a general purpose telemetry tracking system for the M.I.M. Using APRS it is possible to transmit the telemetry equations, parameter definitions and channel units IN REAL TIME! Once any APRS station receives these parameter transmissions, it is then ready to receive and to display the real-time telemetry values in the proper engineering units. A sketch of the APRS telemetry display is shown below:

PRELIMINARY!!! APRS CODE NOT YET FINISHED!!!

CHANNEL	UNITS	SAMPLES									
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Serial	#	15	16	17	18	19	20	21	22	23	24
Time	HHmm	1236	1246	1256	1306	1317	1327	1337	1347	1357	1407
Battery	volts	12.6	12.6	12.6	12.5	12.5	12.4	12.3	12.3	12.2	12.2
BTemp	deg.F	85.3	83.2	81.5	80.6	80.1	79.8	79.7	78.4	77.3	76.0
AirTemp	deg.F	96.8	96.8	97.0	97.4	97.8	98.2	98.6	99.0	99.4	99.8
Pres	mBars	986	975	936	927	918	854	823	817	798	754
Camera	bit	.	.	clik	.	.	.	clik	.	.	.
Chute	bit	off	off	off	off	off	off	off	off	off	off
SunSens	bit	on	.	on	.	on	.	on	.	on	.
10mXmtr	bit	on	.	.	on	.	.	.	on	.	.
ATVxmtr	bit	high	high	high	high	high	high

Notice that the M.I.M module transmits a value for each of its four analog channels and each of its five digital bits once every sample time. The sample periodicity can be set from any value from 1 second to 30 minutes depending on the application. Each sample includes a unique serial number.

In addition, not only can the parameter name, units and equations be specified for each of the analog channels, but the word to be associated with either the 0 or 1 value of each digital bit can also be specified.

To configure all APRS stations to properly decode the telemetry from the M.I.M module, the net control station (or any other designated station in the APRS network) needs to transmit the proper parameter definition packets. These packets are transmitted as APRS messages TO the CALLSIGN of the M.I.M module. If the M.I.M module is using the callsign of N3MIM, then the parameter definition station would send the following three messages:

To N3MIM:PARM.Battery,BTemp,AirTemp,Pres,Camra,Chute,SunSens,GndSens,10m,ATV
 To N3MIM:UNIT.Volts,deg.F,deg.F,Mbar,Clik,OPEN!,1,on,on,high
 To N3MIM:EQNS.0,2.6,0,0,.53,-32,3.439.49,-32,3,18,1,1,0,1,1,0

The PARM format specifies the name of each of the nine parameters. The UNITS format specifies what units are to be displayed, and for the digital bits, show what label is associated with the digital condition. The EQNS format has three coefficients for each of the analog channels, and either a 1 or a 0 for each of the five digital channels to indicate which state is associated with the indicated label. This permits the payload designer to use 1's or 0's as convenient with his circuitry without being forced to always use 0 for OFF and 1 to mean ON. The three values for each of the analog channels are simply the coefficients of a quadratic equation:

Final value = $A \cdot X^2 + B \cdot X + C$ Where X is the M.I.M transmitted value

FORMAL SPECIFICATION: The specific format for the PARM, UNIT, and EQNS packets are shown below:

PARM.P1,P2,P3,P4,B1,B2,B3,B4,B5 Where Pn and Bn are the parameter names

UNIT,U1,U2,U3,U4,L1,L2,L3,L4,L5 Where Un are the units for analog ports
and Ln are the labels for the bits

EQNS,A1,B1,C1,A2,B2,C2,A3,B3,C3,A4,B4,C4,x,x,x,x,x Where the An,Bn,Cn
are the coefficients for each of the
analog channels, and the x's are either
1 or 0 depending on which state matches
the indicated BIT label.

PRELIMINARY INFO ONLY. MAYBE WE WILL FINISH BY
DAYTON!!!!

From bruninga@greatlakes.nadn.navy.mil Wed Jan 11 16:17:52 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSBMQ-0001SZC; Wed, 11 Jan 95 16:17 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA23209; Wed, 11 Jan 95 17:17:23 EST
Date: Wed, 11 Jan 1995 17:17:23 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Multiple CONSOLES at EOC centers
Message-Id: <Pine.SUN.3.91.950111170742.22954A-1000000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

We did a RACES drill last night at the county EOC. All I took was a
laptop, and a special serial cable, and yet we put three different PC's
in DIFFERENT rooms on the air. See the following text which has been
added to README\OPS.txt:

RACES AND EMERGENCY OPERATIONS CENTERS: Dont overlook the fact, that a
handful of separate PC computers can ALL BE CONNECTED TO A SINGLE TNC AND
RADIO! This fact can be used to create quite an impressive multi-station
tactical communications system that will rival some 911 consoles! For now
(im working on a slave mode in version 6.4) just designate one console as the
APRS operator connected to the TNC in the normal fashion. Then connect all
other consoles to just ground and RXD coming out of the TNC. This way ALL
consoles see the tactical picture, and these SLAVE PC's are at the individual
operator's disposal to zoom in, and hop from screen to screen to give them
access to what ever info they need! Do not think that a big screen display
is better. A single big screen is impressive, but actually useless. Only
the person at the KEYBOARD of an APRS system can actually get any info from
APRS. In our county, you need to be below the 8 mile scale to get an idea
of what is going on at a crisis, and while you are zoomed in there, others
need to be focusing on other parts of the county.

So just prepare your serial cable between the main APRS PC and the TNC
to have several RCV only cables attached, and string them out throughout the
EOC to any spare PC's in the building. That way, anyone at those PC's has

INDEPENDENT access to all of the APRS info without bothering the APRS operator who is currorsing around like mad just trying to keep up with the traffic. Remember that these RCV only cables can be simply 2 conductor radio shack miniature zip cord. You can carry hundreds of feet of this stuff inthe briefcase with your portable laptop!

NOTE, that only the APRS operator can introduce information into the APRS network (on the air) and that the slaves are just info access terminals to give other personnel access to that info. To make a true multiple console system, I need to define a SLAVE mode that does the following.

- 1) It turns off the automatic rejection of MY packets, so that all consoles can use the same EOC callsign, but still monitor what other consoles under the same call are doing.
- 2) I have to implement a RTS/CTS hardware handshaking BUSY signal, so that only one CONSOLE is sending to the TNC at a time.

Until I do these, however, the multiple RECEIVE console concept is a very powerful tool for allowing all of the EOC operators instant access to APRS displays.

P.S. The multiple RECEIVE consoles see what the main APRS op is putting into the system, because they see his DIGIPEATED packets. So they see what everyone else sees. If they dont see it, then the APRS op is NOT getting out...

From dkelly@tomcat1.tbe.com Wed Jan 11 16:24:45 1995

Return-Path: <dkelly@tomcat1.tbe.com>

Received: from tomcat1.tbe.com by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rSBT7-0001VxC; Wed, 11 Jan 95 16:24 CST

Received: by tomcat1.tbe.com (920330.SGI/920502.SGI.AUT0)

for aprssig@tapr.org id AA20034; Wed, 11 Jan 95 16:23:25 -0600

Date: Wed, 11 Jan 95 16:23:25 -0600

From: dkelly@tomcat1.tbe.com (David Kelly)

Message-Id: <9501112223.AA20034@tomcat1.tbe.com>

To: aprssig@tapr.org

Subject: Re: [APRSSIG:80] Freq?

Reply-To: dkelly@nebula.tbe.com

How rural in North Alabama? I believe 145.790 has been coordinated for APRS for the entire state. You might contact KE4EER @ K4BFT, he's the closest thing to an APRS evangelist you'll find in the area.

73, David N4HHE (also in North Alabama)

--

David Kelly, N4HHE, n4hhe@amsat.org, dkelly@nebula.tbe.com

Did you know that if you took all the economists in the world and lined them up end to end, they'd still point in the wrong direction?

From gjones@tenet.edu Wed Jan 11 16:37:08 1995

Return-Path: <gjones@tenet.edu>

Received: from Alice-Thurman.tenet.edu by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rSBf7-0001aNC; Wed, 11 Jan 95 16:37 CST

Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.9/8.6.9) id

QAA22043 for aprssig@tapr.org; Wed, 11 Jan 1995 16:37:03 -0600
From: Greg Jones <gjones@tenet.edu>
Message-Id: <199501112237.QAA22043@Alice-Thurman.tenet.edu>
Subject: Re: [APRSSIG:77] Cheap \$25 GPS!
To: aprssig@tapr.org
Date: Wed, 11 Jan 1995 16:37:02 -0600 (CST)
In-Reply-To: <Pine.SUN.3.91.950111145208.19496D-1000000@greatlakes.nadn.navy.mil>
from "Robert Bruninga" at Jan 11, 95 02:09:00 pm
X-Mailer: ELM [version 2.4 PL23]
Content-Type: text
Content-Length: 1320

Robert,

If you or someone else can find a large qty of these units, we could probably work up som interest and do a mass buy through TAPR.

Greg

According to Robert Bruninga:

>
> Not really.... But Today I am going around to the local YACHT clubs and
> BOAT yards and posting a sign reading something like this: OLD LORANS
> WANTED! Will pay up to \$25! etc....
>
> If GPS is selling as hot as everyone says it is, then there should be
> lots of junk LORANS being scrapped. Most have NMEA output and are
> perfectly compatible with APRS. Why shell out \$450 for a GPS toy when
> you can have just as much fun wiht a LORAN doing the same thing!? Sure,
> LORAN is only going to be around till 1999, but by then, GPS will only
> cost \$25 hi hi... You can buy brand new LORAN units for \$150 on sale, so
> a used clunker should be worth about \$25 unless you really want one, then
> go ahead an offer \$50 hi hi.
>
> A properly placed call to any of a number of trucking companies that
> are abandoning their LORAN trackers for GPS units should also find
> hundreds of units. A few months ago, an article in 73 mag wrote up such
> a cheap surplused LORAN and the guy was selling them for \$25. He had 100
> of them...
>
> JUST BE SURE THE UNIT OUTPUTS NMEA GLL and VTG.
>
> de WB4APR
>
>

From little@nuts2u.enet.dec.com Wed Jan 11 17:36:09 1995
Return-Path: <little@nuts2u.enet.dec.com>
Received: from inet-gw-2.pa.dec.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSCaE-0001TeC; Wed, 11 Jan 95 17:36 CST
Received: from us2rmc.zko.dec.com by inet-gw-2.pa.dec.com (5.65/10Aug94)
id AA04231; Wed, 11 Jan 95 15:30:36 -0800
Received: from nuts2u.enet by us2rmc.zko.dec.com (5.65/rmc-22feb94)

id AA25485; Wed, 11 Jan 95 18:29:00 -0500
Message-Id: <9501112329.AA25485@us2rmc.zko.dec.com>
Received: from nuts2u.enet; by us2rmc.enet; Wed, 11 Jan 95 18:30:12 EST
Date: Wed, 11 Jan 95 18:30:12 EST
From: "Todd Little, Pegasus" <little@nuts2u.enet.dec.com>
To: aprssig@tapr.org
Apparently-To: aprssig@tapr.org
Subject: RE: [APRSSIG:84] Re: Cheap \$25 GPS!

What's the coverage for LORAN? I was under the impression that there are large areas of the country not covered by it. Anyone have a map giving LORAN coverage?

73,
Todd
N9MWB
From DJVelez@aol.com
From: Gregory.R.Laborde@jpl.nasa.gov Wed Jan 11 19:03:50 1995
Return-Path: <DJVelez@aol.com>
Received: from mail02.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSDx5-0001dgC; Wed, 11 Jan 95 19:03 CST
Received: by mail02.mail.aol.com
(1.38.193.5/16.2) id AA21170; Wed, 11 Jan 1995 20:04:42 -0500
Date: Wed, 11 Jan 1995 20:04:42 -0500
From: DJVelez@aol.com
Message-Id: <950111191559_6033741@aol.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:61] Running APRS

Date: 95-01-09 18:54:25 EST
From: Gregory.R.Laborde@jpl.nasa.gov (Gregory R. LaBorde)
Sender: aprssig@tapr.org
Reply-to: aprssig@tapr.org
To: aprssig@tapr.org

<EDITED>

"Also, can APRS be run on an HP200LX (with a KPC-3)?"

Absolutely...several in this area doing that. Delete unnecessary maps and other files...

Dan N4WZR

From robertgm@romulus.ncsc.mil Wed Jan 11 19:34:16 1995
Return-Path: <robertgm@romulus.ncsc.mil>
Received: from romulus.ncsc.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSEQX-0001I1C; Wed, 11 Jan 95 19:34 CST
Received: (from robertgm@localhost) by romulus.ncsc.mil (8.6.9/8.6.6) id UAA26561
for aprssig@tapr.org; Wed, 11 Jan 1995 20:33:19 -0500

Date: Wed, 11 Jan 1995 20:33:19 -0500
From: "Robert G. Mahoney" <robertgm@romulus.ncsc.mil>
Message-Id: <199501120133.UAA26561@romulus.ncsc.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:82] Multiple CONSOLEs at EOC centers

Bob,

After talking to you today abt the EOC exercise I realized I'd forgotten one item. There were lots of bulletins posted last night. They were beginning to scroll off the screen when I hit the "B". During a real emergency it may be helpful to enable paging similar to positions and beacons. My apologies if it was just operator ignorance. BTW tnx for the hard work on APRS.

Bob wb8cxn
From pete@bearnnet.demon.co.uk Thu Jan 12 13:44:07 1995
Return-Path: <pete@bearnnet.demon.co.uk>
Received: from bearnnet.demon.co.uk by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rSVQw-0000xYC; Thu, 12 Jan 95 13:43 CST
Date: Thu, 12 Jan 1995 19:35:54 GMT
From: pete@bearnnet.demon.co.uk (Peter Baston)
Reply-To: pete@bearnnet.demon.co.uk
Message-Id: <371@bearnnet.demon.co.uk>
To: aprssig@tapr.org
Subject: U.K. N.G.R. (fwd)
X-Mailer: PCElm 1.10
Lines: 33

I'll post the following again now Bob has joined the sig,
welcome Bob, by the way !

Forwarded message follows:

>
> Hi all !
>
> My first version of APRS was version 5.9cn, which I got
> from GOMAM, the RSGB's Emergency Communications Officer. This
> version displayed U.K. National Grid Reference as well as
> Lat/Long in the top left of the screen, only when the cursor is
> in the UK area.
>
> I then got hold of version 6.2b (the latest?) from the
> BBS. I note that this version no longer displays NGR.
>
> Does anybody know what happened to the NGR ? Was 5.9cn
> maybe a special version for the UK ?? I see no mention in the
> readme files.
>
> P.S Hi Keith, WU2Z, I used to be a neighbour of yours (East
> Brunswick) I think we may have spoken on the Oldbridge repeater
> once ?

>
> Pete GW0PJA / AA2DZ.
> --
> Pete Baston, Clwyd, North Wales, U.K.
>

--
Pete Baston, Clwyd, North Wales, U.K.

From Gregory.R.Laborde@jpl.nasa.gov Thu Jan 12 15:34:49 1995
Return-Path: <Gregory.R.Laborde@jpl.nasa.gov>
Received: from hafgan-fddi.jpl.nasa.gov by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSXA8-0000xdC; Thu, 12 Jan 95 15:34 CST
Received: from kilroy.jpl.nasa.gov by hafgan.jpl.nasa.gov; Thu, 12 Jan 95 13:34:24
-0700
Received: from by kilroy.Jpl.Nasa.Gov (4.1/SMI-4.1+DXRs2.3)
id AB23051; Thu, 12 Jan 95 13:34:07 PST
Date: Thu, 12 Jan 95 13:34:07 PST
Message-Id: <9501122134.AB23051@kilroy.Jpl.Nasa.Gov>
X-Sender: laborde@128.149.63.2
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: aprssig@tapr.org
From: Gregory.R.Laborde@jpl.nasa.gov (Gregory R. LaBorde)
Subject: Re: [APRSSIG:86] Re: Running APRS

Me>>"Also, can APRS be run on an HP200LX (with a KPC-3)?"

>Absolutely...several in this area doing that. Delete unnecessary maps and
>other files...

Cool! I am expecting one to arrive today. And I have an extra TNC to go
with it so no need to monkey with my main system. Now, where can I ftp the
latest APRS from, and how do I get maps of California as opposed to Idaho
and Vermont?

-Greg

--
Gregory R. LaBorde - KD6MSM | Internet: laborde@kilroy.jpl.nasa.gov
Jet Propulsion Laboratory | AMPRNet : kd6msm@jpl-gw.w6vio.ampr.org
Systems Engineering - Galileo OET | Packet : KD6MSM@W6VIO.#SOCA.CA.USA.NA
M/S 264-805 4800 Oak Grove Drive | Phone : (818) 393-1107
Pasadena, CA 91109 |

From Emmet2@aol.com Thu Jan 12 16:40:36 1995
Return-Path: <Emmet2@aol.com>
Received: from mail04.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSYC1-0000bvC; Thu, 12 Jan 95 16:40 CST
Received: by mail04.mail.aol.com
(1.38.193.5/16.2) id AA03150; Thu, 12 Jan 1995 17:37:22 -0500

Date: Thu, 12 Jan 1995 17:37:22 -0500
From: Emmet2@aol.com
Message-Id: <950112172904_7066414@aol.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:73] Re:Davis Weather Monitor II

What is the advantage of the Davis Weather Monitor over the Ultimeter? Did you compare the two, or did you already have the former before becoming interested in APRS?

- Chip Griffin aka Granite
- President of Thames River Apple Users Group
- SysOp of The Quarry LLBBS (203-889-6427)

= Emmet2 (America Online) = emmet2@aol.com (internet)
= N1MIE@N10KK.CT.USA (packet) = 1:320/301 (fidonet)

From klarson@access.digex.net Thu Jan 12 21:56:17 1995
Return-Path: <klarson@access.digex.net>
Received: from access3.digex.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSd7V-0001JSC; Thu, 12 Jan 95 21:56 CST
Received: by access3.digex.net id AA22042
(5.67b8/IDA-1.5 for APRSSIG <aprssig@tapr.org>); Thu, 12 Jan 1995 22:56:01 -0500
Date: Thu, 12 Jan 1995 22:56:01 -0500 (EST)
From: Kent Larson <klarson@access.digex.net>
To: APRSSIG <aprssig@tapr.org>
Subject: APRS63B fatal error
Message-Id: <Pine.SUN.3.91.950112224900.19897A-1000000@access3.digex.net>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Bob,

Moved APRS63b off my big machine to a 386 40 and am now getting -

"String space corrupt in module APRS63X at address 12F6:CE65

Hit any key to return to system"

Does this error tell me something about my system? Havn't heard anyone else having a problem. This is the computer we are planning on using at Winterfest so let me know ASAP if you think I have a system problem.

Also, one tablet is working great and Dan is working on the other one. I have a Vienna map made and will try to uuencode it in a message.

Dan, a couple of other APRS'rs and myself will be at the Richmond Frostfest this Sunday. You going to make it?

Kent

From FredMuller@aol.com Fri Jan 13 22:16:43 1995
Return-Path: <FredMuller@aol.com>
Received: from mail04.mail.aol.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rSzuq-0001MaC; Fri, 13 Jan 95 22:16 CST

Received: by mail04.mail.aol.com
(1.38.193.5/16.2) id AA19854; Fri, 13 Jan 1995 23:13:30 -0500
Date: Fri, 13 Jan 1995 23:13:30 -0500
From: FredMuller@aol.com
Message-Id: <950113231328_373931@aol.com>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:62] Re: unning APRS63b

I found the same problem, and the fix is to unzip using pkunzip -d (this puts everything in the proper directories).
Fred Muller WA6LQL

From billh@INS.INFONET.NET Sun Jan 15 23:16:55 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rTjoD-0000MDC; Sun, 15 Jan 95 23:16 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 7; Sun, 15 Jan 1995 23:18:24 CST
Date: Sun, 15 Jan 1995 23:18:23 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098A856.C24442B0.7@INS.INFONET.NET>
Subject: FUNCTION of "RELAY,GATE,etc."

I sure could use a detailed description of the functions of the various UNPROTO commands "RELAY,GATE,WIDE,ECHO" and the pros and cons of using each and under what circumstances.

Where is the latest version of MacAPRS to be found for ftp downloading?
73;Bill

From thayes@grimaldi.rutgers.edu Mon Jan 16 13:31:25 1995
Return-Path: <thayes@grimaldi.rutgers.edu>
Received: from grimaldi.rutgers.edu by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rTx95-0000pvC; Mon, 16 Jan 95 13:31 CST
Received: from localhost (thayes@localhost) by grimaldi.rutgers.edu
(8.6.8.1+bestmx+oldruq+newsunq/8.6.6) with ESMTP id OAA24806 for
<aprssig@tapr.org>; Mon, 16 Jan 1995 14:31:16 -0500
Message-Id: <199501161931.OAA24806@grimaldi.rutgers.edu>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:93] FUNCTION of "RELAY,GATE,etc."
In-reply-to: Your message of "Sun, 15 Jan 1995 23:28:00 CST."
Date: Mon, 16 Jan 1995 14:31:16 -0500
From: Tim Hayes <thayes@grimaldi.rutgers.edu>

>I sure could use a detailed description of the functions of the various
>UNPROTO commands "RELAY,GATE,WIDE,ECHO" and the pros and cons of using
>each and under what circumstances.

First I'll give a description of the four types of digipeaters and then some discussion on how you should and shouldn't use them...

****IMPORTANT**** Don't put more then one RELAY or ECHO in a row in your UNPROTO path. Don't put more than two of *ANY* type in a row ever.

WIDE = For VHF use. A WIDE is a digipeater covering a large geographic

area (or at least a strategic one). A station shouldn't be a WIDE if it has a small overage area, is not up most of the time, or provides coverage over the same area as another WIDE. Two wides with the same coverage area cause lots of collisions. Avoid setting up a WIDE unless you know it won't hurt anything.

RELAY = For VHF use. A RELAY station is a digi that does not have a large enough coverage to warrant it being called a WIDE. Most stations set their alias to RELAY so that stations with poor coverage can digi through them to a WIDE.

ECHO = For HF use. The same as RELAY.

GATE = A gateway between HF and VHF. I think most gateways repeat the packet on both VHF and HF so they can act much like RELAY or ECHO, but they also transmit on the other band as well.

* IMPORTANT: *

As for how to use these, don't *EVER* put more than two of the same type in a row. If you do then you will cause a packet storm as the packets bounce back and forth between the two stations.

With RELAY and ECHO (especially ECHO) never use more than ONE in a row or you will just cause collisions. ECHO's and RELAY's can't hear each other most of the time and will transmit on top of each other causing needless interference! GATE's and WIDE's are assumed to have a large enough coverage circle that this isn't a problem.

Use ECHO sparingly or *NOT AT ALL*. ECHO can cause lots of problems on HF because of the way the signals propagate. Using two ECHO's in a row can clog up an HF frequency really fast.

Use call signs whenever practical. On VHF "WIDE,WIDE" will give you the best coverage. If you know the call of the closest wide (look at the map!!) use the call (ie: "WA2NPP,WIDE" instead of "WIDE,WIDE".) You probably want to leave the second WIDE alone so that "WA2NPP", or whoever, can digi through all the WIDE's it can reach.

If you can't hit a WIDE directly then go through a RELAY. Once you find one that works, try using its callsign instead of "RELAY". (ie: start out with "RELAY,WIDE,WIDE" and then when you find a good relay to use switch to using the callsign "KB2ICI,WIDE,WIDE".)

For a VHF station try "WIDE,WIDE" or "WIDE,GATE" (if there is a GATE around)

For an HF station try "GATE,WIDE"

NEVER *NEVER* *NEVER* use "WIDE,WIDE,WIDE" unless you like causing problems for others. Your packet can bounce around for a minute or

more in some areas of the country (like the NY metro area!)

NEVER *NEVER* *NEVER* use "ECHO, ECHO" unless you like causing the same problems on HF.

These are general rules. Once you become familiar with your operating channel then you can perhaps break some of these rules. If you do, please check every so often to make sure nothing has changes and that it is still ok to operate that way.

(I'm not an APRS guru, but I play one on TV!)

From jbaum@freenet.columbus.oh.us Mon Jan 16 21:30:20 1995
Return-Path: <jbaum@acme.freenet.columbus.oh.us>
Received: from acme.freenet.columbus.oh.us by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rU4ca-0000t0C; Mon, 16 Jan 95 21:30 CST
Received: by acme.freenet.columbus.oh.us (8.6.9/5.901231) id WAA25052; Mon, 16 Jan 1995 22:30:45 -0500
Date: Mon, 16 Jan 1995 22:23:02 -0500 (EST)
From: John Baum <jbaum@freenet.columbus.oh.us>
Subject: Re: [APRSSIG:94] Re: FUNCTION of "RELAY,GATE,etc."
To: aprssig@tapr.org
cc: aprssig@tapr.org
In-Reply-To: <199501161931.0AA24806@grimaldi.rutgers.edu>
Message-ID: <Pine.3.07.9501162200.A23150-a1000000@acme>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Another thing to remeber on setting paths is that you can save multiple paths with the "O"perations "D"igipath sa"V"e command. It shows that you can save 13 different digi paths.

A good way of seeing who you should have in your digipath is to go to the "D"igipeaters screen. On version 6.2 and above, if you are hearing another station direct there will be a "*" to the left of that stations call. You can make any of those stations your first "hop".

As normal, I probably made this seem as clear as mud.

"da little old ohio map maker" - KB8JX0 - John Baum

From billh@INS.INFONET.NET Tue Jan 17 18:26:37 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rU0EM-0001CsC; Tue, 17 Jan 95 18:26 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 196; Tue, 17 Jan 1995 18:28:00 CST
Date: Tue, 17 Jan 1995 18:28:00 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098A9C0.85CD2502.196@INS.INFONET.NET>
Subject: TNX

TNX for those tt replied with vy good descriptions of the APRS "RELAY,
WIDE,ECHO<GATEWAY" commands.

That was a big help!

73, Bill

From cll4@Ra.MsState.Edu Wed Jan 18 16:44:30 1995

Return-Path: <cll4@Ra.MsState.Edu>

Received: from Tut.MsState.Edu by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rUj75-0000R5C; Wed, 18 Jan 95 16:44 CST

Received: from Ra.MsState.Edu (cll4@Ra.MsState.Edu [130.18.80.10]);

by Tut.MsState.Edu using SMTP (8.6.9/6.5m-FWP);

id QAA08968; Wed, 18 Jan 1995 16:44:24 -0600

Received: (cll4@localhost);

by Ra.MsState.Edu (8.6.8.1/6.0c-FWP);

id QAA08378; Wed, 18 Jan 1995 16:44:19 -0600

Date: Wed, 18 Jan 1995 16:44:18 -0600 (CST)

From: "Craig L. Lindsey" <cll4@Ra.MsState.Edu>

To: aprssig@tapr.org

Subject: Map makers

Message-ID: <Pine.SUN.3.91.950118163902.7711A-100000@Ra.MsState.Edu>

MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Who created the MScentrl map? I have gotten a few people interested in APRS in the area north of here (Starkville). The interested people are in Northeastern MS, and they will be wanting a little better map for that area (acutally they will want A map..there's nothing but the basic map). I would like to get in touch with whoever made the mscentrl map and see if they would be interested in making a northeast MS map. From the way it looks right now, northeast and central MS may be picking up APRS activity soon.

Thanks for any info,

Craig

Craig Lindsey - KC5AUG | My politics are simple: Always go right. If
Internet: cll4@ra.msstate.edu| you go left, you can never go right, and if
Office Phone : (601)325-8553 | you go right, you never go wrong. -Grizzard
WWW page: <http://www2.msstate.edu/~cll4/>
Finger cll4@ra.msstate.edu for PGP public key.

From jbaum@freenet.columbus.oh.us Thu Jan 19 06:02:15 1995

Return-Path: <jbaum@freenet.columbus.oh.us>

Received: from acme.freenet.columbus.oh.us by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rUvZ6-00006UC; Thu, 19 Jan 95 06:02 CST

Received: by acme.freenet.columbus.oh.us (8.6.9/4.940426)

id HAA16555; Thu, 19 Jan 1995 07:02:40 -0500

Date: Thu, 19 Jan 1995 06:49:25 -0500 (EST)

From: John Baum <jbaum@freenet.columbus.oh.us>

Subject: Re: [APRSSIG:97] Map makers

To: aprssig@tapr.org

In-Reply-To: <Pine.SUN.3.91.950118163902.7711A-100000@Ra.MsState.Edu>

Message-ID: <Pine.3.07.9501190623.A14443-a100000@acme>

MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I think that MSCENTL.MAP was one that Bob (WB4APR) did using the USGS CD-ROM. The 8th line of the "Map" indicates that is from the 2,000,000 to 1 ROM, and WB4APR is the most prolific CD-ROM mapmaker.

Normally I'd volunteer, but I've committed to finishing off part of Ohio covered by the Wilmington Nat. Wx. Center prior to spring, and taken on Southern MI.

But, if you know someone who would like to make maps, I'd be more than happy to help get them started.

The Ohio Map Maker - John Baum - KB8JX0

From bruninga@greatlakes.nadn.navy.mil Thu Jan 19 16:37:03 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rV5T0-0000b9C; Thu, 19 Jan 95 16:36 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1) id AA01641; Thu, 19 Jan 95 17:36:49 EST
Date: Thu, 19 Jan 1995 17:36:48 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:94] Re: FUNCTION of "RELAY,GATE,etc."
In-Reply-To: <199501161931.0AA24806@grimaldi.rutgers.edu>
Message-Id: <Pine.SUN.3.91.950119171959.1161H-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Well, with a spurt of growth over the last week, with 9 WIDES between central VA and NY city, plus lots of "hidden (personal)" wides, we are starting to hear some forever packets wirling around. I saw one guy with a SEVEN line BULLETIN going via digi1,WIDE,digi2,WIDE,WIDE,WIDE. When I pointed out that he is generating the potential for OVER 4000 packets every 10 minutes, I convinced him that he could cover the same area from NYCity to VA with digi1,WIDE,digi2,digi3,digi4 and that no-one would ever hear more than 2. That is a 2000 to 1 reduction in QRM by using one's head....

I also saw something like digi1,WIDE,RELAY,WIDE. Now assuming that 10 APRS stations (all acting as RELAY of course) all digipeated the packet, AT EACH OF THE 4 WIDES THAT HEARD THE digi1 packet, then we have 40 packets then ready to hit the remaining 8 WIDES that will now all hear the 40, and you have 320 packets PER PACKET From that station. THIS IS CRAZY! NEVER use RELAY in ANY position EXCEPT THE FIRST, and once you know who is digipeating you, WHY EVEN DO IT THEN?!

RELAY is only there for areas without permanent WIDES. Once you have identified high VHF sites, they should be WIDE if anything..

Much of these problems will go away if we can get the TNC writers to

implement my WIDE-N algorithm. But until then, we gotta be smart. I agree with the other comments, that if there are 3 or more WIDES that can hear each other ANYWHERE, then NEVER send a W,W,W. (27 packets result).

AND FINALLY, lets be NICE to each other... Just because someone has W,W,W in his DIGI list on the D page, dont jump on him. He might be doing something special... But after holding your breath for 5 minutes, then tell him... hi hi Similarly, I see NO reason why anyone should be using ECHO on HF (unless they are in extremis or a special event). Even then, ECHO is probably useless. He is much better off picking a far away, but solid station and using him ONLY as a digi. AGAIN, though, ONLY FOR SPECIAL. I want to encourage everyone NOT TO DIGI in general on HF, because it distroys the statistics on the HEARD LOG. That HEARD page is a valuable resource for determining propogation. If someone digipeats, then nobody knows if the band is open, or just that someone is bouncing in via a different direction. I spect this will not be the last we will hear about digipeating, hi hi.... :)

From billh@INS.INFONET.NET Thu Jan 19 17:20:46 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rV69j-0000avC; Thu, 19 Jan 95 17:20 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 35; Thu, 19 Jan 1995 17:22:10 CST
Date: Thu, 19 Jan 1995 17:22:10 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098AB49.A80A3F2B.35@INS.INFONET.NET>
Subject: QTH of MacAPRS 1.2.2 et al

I chkd 128.54.16.7
and its incoming subdirectory...the latest is 1.2.1, I've seen tt a
version MacAPRS 1.2.2 is out.
Where can the latest versions be ftp-ed from?
73, Bill

From bruninga@greatlakes.nadn.navy.mil Thu Jan 19 17:30:50 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rV6JS-0001B9C; Thu, 19 Jan 95 17:30 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA01921; Thu, 19 Jan 95 18:30:38 EST
Date: Thu, 19 Jan 1995 18:30:38 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: APRS Traffic MilePosts
Message-Id: <Pine.SUN.3.91.950119182643.1917B-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

A week ago, I announced the APRS telemetry system based on the N3MIM single CHIP Micro Interface Module, which is a complete AX.25 8 channel telemetry TNC (transmit only) on a chip. The original intent of this MIM module was to make a match box sized throw-away PACKET balloon payload. Now consider an application much closer to home for the APRS commuter:

TRAFFIC monitoring MILE posts! This is a neat idea! Given that HAMS will be commuting with APRS moving Map displays, why not build a match box sized traffic SPEED detector (solar powered MIM module) that can be stuck on the side of a highway pole ? With a \$1.29 crystal MIC from radio shack, use DSP to figure out the speed of the traffic based on audio analysis! Beacon this SPEED once every two minutes at about 10 mW. The beacon will, of course, include the LOCATION of the device. What the APRS commuter sees on his MAP is these MILE posts ahead of him showing traffic speeds! He can then decide on alternate routing!

We have plenty of room in the MIM to add this DSP (maybe), IS THERE ANYONE OUT THERE THAT IS INTO DSP THAT CAN DETERMINE THE ALGORITHM TO DETERMINE SPEED FROM THE AUDIO OF TRAFFIC?????????? (or the amplitude fluctuations of a photo cell?) NO Doppler X band or road sensors please, This thing has to be autonomous and VERY small to be able to be SOLAR powered and able to be COVERTLY installed with out a lot of STATE HIGHWAY bureaucracy.

To support these MILEPOSTS, I am going to add the "m" character to the APRS symbols list. It will appear something like a SIGNPOST on the map, but instead of displaying a CALLSIGN, it will display a VALUE. In this case, the sign will display "60" if the traffic is moving at 60 MPH... etc. This sign post symbol can be used by other STAND ALONE packet telemetry devices that need to announce certain conditions on a map. For example, Water or FLOOD levels....

NOW WHO IS GONNA BUILD THE FIRST TRAFFIC SPEED MONITOR????

From janderson@ram.net Fri Jan 20 08:14:55 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVK72-0000NiC; Fri, 20 Jan 95 08:14 CST
Received: by ram.net (5.65/1.2-eef)
id AA27192; Fri, 20 Jan 95 09:08:26 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:101] APRS Traffic MilePosts
Date: Fri, 20 Jan 95 09:13:32 EST
Message-Id: <02154.15021591@RAMail>
Version: RAMail 2.8h
Location: TYSON'S CORNER (2712) MCLEAN, VA

>(or the amplitude fluctuations of a photo cell?) NO Doppler X band
>or road sensors please, This thing has to be autonomous and VERY small
>to be able to be SOLAR powered and able to be COVERTLY installed with
>out a lot of STATE HIGHWAY bureaucracy.

Actually, Doppler X band may not be a bad place to start with this. I have a 10 GHz Gunnplexer that came from a motion detector. It runs on about 6 VDC and puts out a very clean audio tone from its detector diode when it sees a moving object. The frequency of the tone represents the difference of the fundamental gunnplexer frequency and the Doppler shifted frequency of

the signal bouncing off the moving object. I connect this to the input of a Radio Shack self contained audio amplifier and listen to it with headphones. Granted, it is not as small as a condensor microphone, but the output signal would be much easier to work with. These Gunnplexers are sometimes available at hamfests, and contacting some local alarm companies may have good results too.

Jack

n4uls@ram.net

From bruninga@greatlakes.nadn.navy.mil Fri Jan 20 08:44:07 1995

Return-Path: <bruninga@greatlakes.nadn.navy.mil>

Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rVKZH-0000QuC; Fri, 20 Jan 95 08:44 CST

Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1) id AA05094; Fri, 20 Jan 95 09:43:56 EST

Date: Fri, 20 Jan 1995 09:43:55 -0500 (EST)

From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>

To: aprssig@tapr.org

Subject: Re: [APRSSIG:102] Re: APRS Traffic MilePosts

In-Reply-To: <02154.15021591@RAMail>

Message-Id: <Pine.SUN.3.91.950120093717.4915B-1000000@greatlakes.nadn.navy.mil>

Mime-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Yes, I have no real problem with the SIZE of the 10Ghz gunplexor as a traffic speed sensor, but I am concerned about the POWER consumed. If I remember corectly, we are talking about lots of MA. DO you recall? Of course, since you will only be generating a traffic speed value once every N minutes, then can the Gplexor be turned on and off relatively shortly? Probably so, since drift is meaningless, since it is only the doppler diffenrence we are listening to...

But I though we would have to monitor continuously to get a smoooth average of the traffic speed. But with something as accurate as a doppler device, then maybe that wouldnt matter either.

You are certainly correct that it would only take a few lines of code int he MIM telemetry chip to determine the audio tone!!!

Although I am no longer an interstate commuter, if I was, I WOULD be working on this for my own self interest! hi hi. Of course those guys spend so much time in their cars, that they dont have time to play circuits! oh well...

From Richard_Matthews@shsvsmtp.huntsville.sparta.com Fri Jan 20 09:05:09 1995

Return-Path: <Richard_Matthews@shsvsmtp.huntsville.sparta.com>

Received: from huntsville.sparta.com by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rVKtf-0000QDC; Fri, 20 Jan 95 09:05 CST

Received: from shsvsmtp.huntsville.sparta.com by huntsville.sparta.com (4.1/hsv(940816dfr))

id AA01576; Fri, 20 Jan 95 09:05:00 CST

Received: from QuickMail by shsvsmtp.huntsville.sparta.com

id qm-00001; Fri, 20 Jan 1995 09:04:59 -0600

Message-Id: <199501200904596734@shsvsmtp.huntsville.sparta.com>

X-Mailer: InterCon Dispatcher/SMTP for QuickMail

X-Priority: 4

Date: Fri, 20 Jan 1995 09:04:59 -0600
From: Richard Matthews <Richard_Matthews@shsvsmtp.huntsville.sparta.com>
Subject: RE>Audio detector mileposts
To: aprssig <aprssig@tapr.org>

Audio detection can be used to accurately measure speed. I was involved in a missile test range project a few years back where we used microphones spaced at a precise distance to record the speed of a missile going about 5000' per second. Seems to me you could do the same by detecting an audio pattern taken from pickup microphones that were located a known distance apart. Distance moved in some interval of time equals speed.

wa4nww, Richard

From janderson@ram.net Fri Jan 20 09:10:19 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVKxg-0000MQC; Fri, 20 Jan 95 09:09 CST
Received: by ram.net (5.65/1.2-eef)
id AA27604; Fri, 20 Jan 95 10:01:44 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:103] Re: APRS Traffic MilePosts
Date: Fri, 20 Jan 95 10:06:36 EST
Message-Id: <02155.15021591@RAMail>
Version: RAMail 2.8h
Location: ANNANDALE-PARLIAMENT (280) ANNANDALE, VA

> Although I am no longer an interstate commuter, if I was, I WOULD be
>working on this for my own self interest! hi hi. Of course those guys
>spend so much time in their cars, that they dont have time to play
>circuits! oh well...

I will donate my Gunnplexer to anyone here in the MDC area who is serious about developing a prototype. I haven't used it much lately, and I'm really not qualified to write the microcode to make it work. If anyone is interested, let me know.

Jack
n4uls@ram.net
From akasbb1@peabody.sct.ucarb.com Fri Jan 20 11:06:35 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVMn9-0000mfC; Fri, 20 Jan 95 11:06 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA12781; Fri, 20 Jan 1995 12:07:41 -0500
Message-Id: <9501201707.AA12781@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Fri, 20 Jan 1995 12:05:35 -0500

To: aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: Re: [APRSSIG:100] QTH of MacAPRS 1.2.2 et al

>I chkd 128.54.16.7
>and its incoming subdirectory...the latest is 1.2.1, I've seen tt a
>version MacAPRS 1.2.2 is out.
>Where can the latest versions be ftp-ed from?
>73, Bill

Currently, 1.2.1 at UCSD is the latest on the Internet.. 1.2.5 should be up there on Monday... (Tuesday at the latest)

Do you have ARA (AppleTalk Remote Access) If so, you can dial in to my server and get updates even more often than they get put up at Rutgers..

Keith Sproul

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb2ear.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From billh@INS.INFONET.NET Fri Jan 20 11:31:01 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVNAo-0000bLC; Fri, 20 Jan 95 11:30 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 209; Fri, 20 Jan 1995 11:32:24 CST
Date: Fri, 20 Jan 1995 11:32:24 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098ABE1.F61C3E1A.209@INS.INFONET.NET>
Subject: UPDATES TO MacAPRS

TNX for the info Keith. I wish I had APPLE REMOTE ACCESS but don't so will wait 'til updates show up at ucsd.edu in cd /hamradio/packet/tcpip/incoming subdirectory.

73

Bill

From jcw@kd4dts.radio.org Fri Jan 20 15:39:47 1995
Return-Path: <kd4dts!jcw@wa4mei.radio.org>
Received: from wa4mei.radio.org by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVR3Z-0000mcC; Fri, 20 Jan 95 15:39 CST
Received: by wa4mei.radio.org (/==/\ Smail3.1.28.1 #28.7)
id <m0rVR3W-0002nkC@wa4mei.radio.org>; Fri, 20 Jan 95 16:39 EST

Received:

by kd4dts.radio.org

(Linux Smail3.1.28.1 #5)

id m0rVR02-0007SpC; Fri, 20 Jan 95 17:00 EST

Message-Id: <m0rVR02-0007SpC@kd4dts.radio.org>

From: jcw@kd4dts.radio.org (John C. Wren)

Subject: Re: [APRSSIG:103] Re: APRS Traffic MilePosts

To: aprssig@tapr.org

Date: Fri, 20 Jan 1995 17:00:53 -0500 (EST)

In-Reply-To: <Pine.SUN.3.91.950120093717.4915B-100000@greatlakes.nadn.navy.mil>
from "Robert Bruninga" at Jan 20, 95 08:48:00 am

X-Mailer: ELM [version 2.4 PL23]

Content-Type: text

Content-Length: 1462

How do you intend to handle multiple targets, and not having that blow your average? Or the doppler shift created in the window of a faster vehicle passing a slower vehicle? (I assume your talking about pointing the 'plexor into traffic, and not across...)

Seems that using using something that takes advantage of a vehicle detuning a tuned circuit or somesuch might work better...

>

> Yes, I have no real problem with the SIZE of the 10Ghz gunplexor as a
> traffic speed sensor, but I am concerned about the POWER consumed. If I
> remember corectly, we are talking about lots of MA. DO you recall? Of
> course, since you will only be generating a traffic speed value once every
> N minutes, then can the Gplexor be turned on and off relatively shortly?
> Probably so, since drift is meaningless, since it is only the doppler
> diffenrence we are listening to...

> But I though we would have to monitor continuously to get a smoooth
> average of the traffic speed. But with something as accurrate as a
> doppler device, then maybe that wouldnt matter either.

> You are certainly correct that it would only take a few lines of code
> int he MIM telemetry chip to determine the audio tone!!!

> Although I am no longer an interstate commuter, if I was, I WOULD be
> working on this for my own self interest! hi hi. Of course those guys
> spend so much time in their cars, that they dont have time to play
> circuits! oh well...

>

>

From Richard_Matthews@shsvsmtp.huntsville.sparta.com Fri Jan 20 16:26:53 1995

Return-Path: <Richard_Matthews@shsvsmtp.huntsville.sparta.com>

Received: from huntsville.sparta.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVRn6-0001BjC; Fri, 20 Jan 95 16:26 CST

Received: from shsvsmtp.huntsville.sparta.com by huntsville.sparta.com (4.1/hsv(940816dfr))

id AA03150; Fri, 20 Jan 95 16:26:40 CST

Received: from QuickMail by shsvsmtp.huntsville.sparta.com

id qm-00001; Fri, 20 Jan 1995 16:26:40 -0600

Message-Id: <199501201626407942@shsvsmtp.huntsville.sparta.com>
X-Mailer: InterCon Dispatcher/SMTP for QuickMail
X-Priority: 4
Date: Fri, 20 Jan 1995 16:26:40 -0600
From: Richard Matthews <Richard_Matthews@shsvsmtp.huntsville.sparta.com>
Subject: Balloon launch
To: aprssig <aprssig@tapr.org>

The following has just been released by the ARRL

Balloon launch January 21

A balloon carrying Amateur Radio is planned for launch January 21 from Boone, Iowa, by a group calling itself the Iowa Balloon Scientists.

Payloads will include a transmitter sending global positioning information on 446.000 with transmissions at bursts of 9600 baud once per second;

A packet digipeater on 145.550 (-0.600 split), running approximately one watt and switched on and off at 15 minute intervals;

A 144/440 MHz crossband voice repeater (listen on 437.250 (plus or minus) FM. There may be some temperature drift. The uplink frequency is uncertain at this time and will be provided on the packet beacon. Since this is the first flight for this payload, there may be less than optimum operating conditions.

The packet digipeater and voice crossband repeater will alternate at 15 minute intervals, with changes planned for 00, 15, 30, and 45 minutes after the hour.

Interested amateurs are advised to monitor beacons for details on other payloads and operating schedules.

The launch is planned for 1500 UTC. An HF coordination net will meet on 7.155 MHz LSB beginning at 1430 UTC with N0AN as net control station.

Information from Barry Buelow, WA0RJT.

Will this balloon be track by the APRS system? If so what plans are being made for tracking?

wa4nww, Richard

From janderson@ram.net Fri Jan 20 20:55:28 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rVVz2-00019GC; Fri, 20 Jan 95 20:55 CST
Received: by ram.net (5.65/1.2-eef)

id AA03449; Fri, 20 Jan 95 21:48:57 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:108] Re: APRS Traffic MilePosts
Date: Fri, 20 Jan 95 21:53:56 EST
Message-Id: <02160.15021591@RAMail>
Version: RAMail 2.8h
Location: ANNANDALE-PARLIAMENT (280) ANNANDALE, VA

>How do you intend to handle multiple targets, and not having that blow
>your average? Or the doppler shift created in the window of a faster
>vehicle passing a slower vehicle? (I assume your talking about pointing
>the 'plexor into traffic, and not across...)

>

>Seems that using something that takes advantage of a vehicle detuning
>a tuned circuit or somesuch might work better...

Maybe something could be done with laser diodes and detectors. I doubt that even the most sophisticated DSP could make sense of the audio generated by a four lane interstate. A Gunnplexer pointed at one lane of traffic will generate a strong set of signals from the traffic in that lane, and some weaker singles from the traffic in adjacent lanes.

Laser detection would be more precise, but we'd have to figure out how the pros do it.

Jack

n4uls@ram.net

From bruninga@greatlakes.nadn.navy.mil Mon Jan 23 08:42:28 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rWPyK-0001YHC; Mon, 23 Jan 95 08:42 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1) id AA04949; Mon, 23 Jan 95 09:42:13 EST
Date: Mon, 23 Jan 1995 09:42:13 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:110] Re: APRS Traffic MilePosts
In-Reply-To: <02160.15021591@RAMail>
Message-Id: <Pine.SUN.3.91.950123093443.4717C-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Well, This mornings thoughts on the Traffic Mile posts for vehicle speed detection and placement on the APRS moving map display, has flipped over to the Gunnplexor DOppler systems. I scanned a few mags, however, and cannot find any surplus or hobby electronics stores that are selling cheap motion detector gunplexors. If anyone knows of a place... Lemme know.

Yes, unfortunately, the inbound/outbound monitoring is a pain. Any one instrument, will only pick up one dierction. So now you only have one marker on the map. for only one direction. The graphics that I have implemented allows a 3 digit numeral on the signpost. For example 55E

would mean that this is an eastbound sensor and that the traffic is doing about 55. Actually, since COMMON CONGESTION points are RARELY symmetrical on both sides of the highway, this is not that much of a problem. The best place to put a detector (to give you advance warning at a decision point) going in in the morning will almost never be the same place where you will need another data point coming home.

Again, If anyone knows of a reproducible source of Gunn diode front ends, lemme know.

From janderson@ram.net Mon Jan 23 09:00:59 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rWQG2-0000ltC; Mon, 23 Jan 95 09:00 CST
Received: by ram.net (5.65/1.2-eeef)
id AA21723; Mon, 23 Jan 95 09:54:14 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:111] Re: APRS Traffic MilePosts
Date: Mon, 23 Jan 95 12:52:41 EST
Message-Id: <02167.15021591@RAMail>
Version: RAMail 2.8h
Location: TYSON'S CORNER (2712) MCLEAN, VA

>Again, If anyone knows of a reproducible source of Gunn diode front ends,
>lemme know.

You might want to check with AMRAD. A while back they were hot and heavy into the motion detector variety and may know of a source. They were selling for about \$15. I once brought a bunch of test equipment to a tuning part they had. Dave Rogers (N4JGQ) got mine for me.

Jack
n4uls@ram.net

From janderson@ram.net Mon Jan 23 09:30:18 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rWQib-0000f6C; Mon, 23 Jan 95 09:30 CST
Received: by ram.net (5.65/1.2-eeef)
id AA21742; Mon, 23 Jan 95 09:56:22 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:111] Re: APRS Traffic MilePosts
Date: Mon, 23 Jan 95 12:54:31 EST
Message-Id: <02168.15021591@RAMail>
Version: RAMail 2.8h

>Well, This mornings thoughts on the Traffic Mile posts for vehicle speed
>detection and placement on the APRS moving map display, has flipped over
>to the Gunplexor DOppler systems. I scanned a few mags, however, and
>cannot find any surplus or hobby electronics stores that are selling cheap
>motion detector gunplexors. If anyone knows of a place... Lemme know.

Any thoughts on using laser diodes and detectors? They would be much more selective than the Gunnplexers...

Jack

n4uls@ram.net

From burnett@col.hp.com Mon Jan 23 10:13:54 1995

Return-Path: <burnett@col.hp.com>

Received: from hp.com by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rWR0o-00010xC; Mon, 23 Jan 95 10:13 CST

Received: from hpntdha.col.hp.com (hpntdhe.col.hp.com) by hp.com with SMTP

(1.37.109.14/15.5+ECS 3.3) id AA108667623; Mon, 23 Jan 1995 08:13:43 -0800

Message-Id: <199501231613.AA108667623@hp.com>

Received: by hpntdha.col.hp.com

(1.37.109.8/16.2) id AA27352; Mon, 23 Jan 1995 09:14:05 -0700

From: Charles Burnett <burnett@col.hp.com>

Subject: Re: APRS Traffic MilePosts

To: aprssig@tapr.org

Date: Mon, 23 Jan 95 9:14:03 MST

In-Reply-To: <02160.15021591@RAMail>; from "janderson@ram.net" at Jan 20, 95 9:00 pm

Organization: Hewlett-Packard, Network Test Division

Return-Receipt-To: burnett@col.hp.com

Mailer: Elm [revision: 70.85]

> Maybe something could be done with laser diodes and detectors. I doubt that
> even the most sophisticated DSP could make sense of the audio generated by a
> four lane interstate. A Gunnplexer pointed at one lane of traffic will
> generate a strong set of signals from the traffic in that lane, and some
> weaker singles from the traffic in adjacent lanes.

>

> Laser detection would be more precise, but we'd have to figure out how the
> pros do it.

The pros have done this, so it's only a matter of finding out how.

A source for the pros is...the California Department of Transportation.
Check out the WWW page available for traffic conditions in the San Diego
area. They give information such as average vehicle speed in each lane for
the major freeways in the area. Really cool stuff. Address is:

<http://www.scubed.com:8001/caltrans/sd/sd-transnet.html>

Now if we just had high-speed internet connections in our cars....hi hi.

Charles

--

Charles Burnett

Hewlett-Packard Co.

Network Test Division

P.O. Box 7050

Colorado Springs, CO 80933-7050

Internet: burnett@col.hp.com

Voicemail: (719) 590-2000

Voice: (719) 531-4230

Fax: (719) 531-4540

From bruninga@greatlakes.nadn.navy.mil Wed Jan 25 16:07:43 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rXFJsJ-00018nC; Wed, 25 Jan 95 16:07 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA22421; Wed, 25 Jan 95 14:48:53 EST
Date: Wed, 25 Jan 1995 14:48:53 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:113] Re: APRS Traffic MilePosts
In-Reply-To: <02168.15021591@RAMail>
Message-Id: <Pine.SUN.3.91.950125144730.22307B-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Receiving a lazer diode would be far beyond our capability I would think. The beauty of a GUNN oscillator is that it is its own LO so just DC goes in and audio doppler comes out. Donno how you would get doppler info from optical frequencies. Without some very expensive stuff....

From akasbb1@peabody.sct.ucarb.com Thu Jan 26 09:40:16 1995
Return-Path: <akasbb1@peabody.sct.ucarb.com>
Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rXWiu-0000HoC; Thu, 26 Jan 95 09:40 CST
Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)
id AA13545; Thu, 26 Jan 1995 10:25:13 -0500
Message-Id: <9501261525.AA13545@peabody.sct.ucarb.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 26 Jan 1995 10:24:06 -0500
To: ablock@nubis.rutgers.edu, dalpert@merle.acns.nwu.edu, daxenos@bu.edu,
"David P. Worrall" <70214.2530@CompuServe.COM>, Emmet2@aol.com,
heyu@aol.com, jan@archimedes.chinalake.navy.mil,
kb2ear@kb2ear.overleaf.com, rbarris@quicksilver.com,
sdimse@umbio.med.miami.edu (Steven S. Dimse), skou@inel.gov,
thayes@hardees.rutgers.edu, tstader@aol.com, wolft@dbisna.com,
wpmichel@srp.gov, ka6eyh@muncey.com, wannamaker@macnet.vpharm.com,
kc6rol@amsat.org, 72170.30@compuserve.com, delta2@infi.net,
castonj@ireq.hydro.qc.ca, lipson@ctobbs.com, rewing@mitre.org,
DwainM7367@aol.com, "Joe Moell" <joemoell@cup.portal.com>,
gpotter@collabra.com, 74736.3171@compuserve.com,
Richard H Inacker <inacker@pogo.den.mmc.com>, Sam_Lipson@Berlex.Com,
GregNel123@aol.com, ken@spacetime.mv.com,
philkeys@olympus.net (Phil Keys), Dick Mead <mead@ucs.usc.edu>,
rtm@Newton.apple.com (Bob Martin), DrewT@aol.com, KE4GNN@aol.com,
maryniak@ocean.rutgers.edu, cikedah@hinc.hawaii.gov,
Sam_Lipson@Berlex.Com, aprssig@tapr.org
From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)
Subject: MacAPRS 1.2.6

MacAPRS 1.2.6 is now up at ftp.ucsd.edu

Currently it is in /hamradio/packet/tcpip/incoming.
However it may get moved to /hamradio/packet/aprs.

In the future, you need to check both places for the most recent version.
The INCOMING directory is where I am allowed to put it, then eventually, it will get moved to the APRS directory..

Take a look at the FEB 95 issue of 73 Magazine Homeing In column. It has a good article about the Macintosh version of APRS. It also shows a preview of the new map files I am working on. These are maps based on the 1:100,000 scale USGS CD-ROMs and show the STREET level!!!

The JAN 95 issue of 73 Magazine has a good article on the PC version.

I will be at the Wheaton Hamfest (Chicago IL) this weekend giving talks about APRS, Skywarn, and Ballooning. If you are going to be there, please look me up.

New features in 1.2.6

- * Automatic Station Time out

This allows you to 'automatically' delete stations that have not been seen for a specified amount of time (in Hours).

- * Message Acknowledgments.

When you receive a message, it IMMEDIATELY response with the ACK. This fixes the problem of receiving two messages back-to-back and only acknowledging the last one.

- * VHF/HF recognition.

If you have a DSP-2232 or a PK-900, The STATION LIST will show you which radio-port each station came in on. It shows Port ONE in RED and Port TWO in BLUE. This has proven to be VERY useful in showing band activity, etc.

This feature is being expanded to also support KAM units, but KAM port recognition is not finished yet.

- * Some of the WEATHER logging/display has been cleaned up.

- * The Statistics window has some new features.

- * In BOTH the Weather Chart window and the STATISTICS CHART window, if you hold down the OPTION key and click in a chart, it will show you the averages and maximums.

- * Automatic Startup

The Automatic startup features have been increased to include TNC input and

Weather input.

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb2ear.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From billh@INS.INFONET.NET Thu Jan 26 12:37:59 1995
Return-Path: <billh@INS.INFONET.NET>
Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rXZ4u-0000AqC; Thu, 26 Jan 95 12:37 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 123; Thu, 26 Jan 1995 12:39:27 CST
Date: Thu, 26 Jan 1995 12:39:27 CST
From: "John W. (Bill) Hays, W00MV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098B0A2.523C79D4.123@INS.INFONET.NET>
Subject: MacAPRS

I suggest, with permission from TAPR, that all updates to MacAPRS and the DOS versions all be posted to the new TAPR ftp site in addition to other places.

73,
Bill

From Bob_Winingham@acd.org Fri Jan 27 02:32:20 1995
Return-Path: <Bob_Winingham@acd.org>
Received: from netcomsv.netcom.com by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rXm6J-0000WnC; Fri, 27 Jan 95 02:32 CST
Received: from acd.org by netcomsv.netcom.com with UUCP (8.6.9/SMI-4.1)
id AAA21625; Fri, 27 Jan 1995 00:25:31 -0800
From: Bob_Winingham@acd.org (Bob Winingham)
Reply-To: Bob_Winingham@acd.org
To: aprssig@tapr.org
Subject: NTBP #6
Date: 26 Jan 1995 22:23:29 GMT
Message-Id: <61373.110608985@acd.org>
Organization: Apple Corps of Dallas

Subj: NTBP #6 ANNOUNCEMENT The North Texas balloon project

Original post on AMSAT-BB by Doug KG50A

The North Texas balloon project will launch it's sixth high altitude balloon experiment carrying amateur radio payloads on the 4th of February, 1995. The payload carries a variety radios and instruments that can be easily used by any amateur with a Technicians license or above.

The launch will be from Cleburn or Cliffton, Texas at approximately 8:00 to 8:30 AM. In the event of inclement weather, the launch will be delayed to the next day, and then to the next Saturday (the 11th). There will be a pre-launch net at 8:30 PM on the Ft.Worth 146.76 repeater the evening before the launch. The morning of launch there will be an HF net on 7.155 MHz +/- QRM. The Net control station will probably be W5IU.

Approximately two hours after launch, the balloon is expected to reach an altitude of 100,000 to 105,000 feet before burst. At this altitude the area of visibility will be about 400 miles in any direction for a total 800 miles communications range. In past missions, there have been QSO's between Corpus Christi, TX and Salina, Kansas.

The following is a list of the available experiments onboard:

Crossband FM Voice Repeater:

There will be a crossband FM repeater open to all. The uplink frequency will be 147.580 MHz and the Downlink will be on 445.850 MHz.

Packet Telemetry on 144.290 MHz:

This receive only packed information will be the data downlink of the mission. The packet format is the common 1200 baud AFSK found in all TNC's. The data will be presented in an easy to read format and no conversions will be required.

GPS:

Precise longitude, latitude and altitude data will be provided by a donated Rockwell NavCore V GPS receiver. The following data will be measured and can be seen on the 144.290 MHz packet downlink:

* UTC day and time	* Longitude	* Latitude
* Altitude	* Bearing	* Velocity
* Velocity up		

Telemetry

There will be onboard 12 bit, 8 channel Analog to Digital converter. Seven of the eight channels are used to measure the following:

* Inside Temperature	* Outside Temperature
* Barometric Altitude	* Main Battery Voltage
* ATV Battery Voltage	* Alkaline Test Battery Voltage
* NiCad Test Battery Voltage	

ATV

There will be a live, full motion, Amateur Television camera and 10 Watt transmitter onboard. The downlink frequency will be 439.250 MHz. This frequency was chosen to exactly correspond to Cable channel # 60. With an outdoor TV antenna (or other 440 MHz

antenna) and the TV tuned to Cable channel 60, it is anticipated that an acceptable pictures can be obtained.

The camera will be remotely pointed via ground command to any of 256 possible positions.

QSL's can be had through KG50A via the Callbook address.

----- -End of cross posting -----

It would be nice if a ground station could retransmit the location in APRS format via the Crossband FM Voice Repeater. This would help get APRS moving in Dallas.

Bob KC5EJK

From janderson@ram.net Fri Jan 27 06:59:52 1995
Return-Path: <janderson@ram.net>
Received: from ram.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rXqHC-0000KoC; Fri, 27 Jan 95 06:59 CST
Received: by ram.net (5.65/1.2-eef)
id AA18170; Fri, 27 Jan 95 07:59:46 -0500
From: janderson@ram.net
To: aprssig@tapr.org
Subject: Re: [APRSSIG:115] Re: APRS Traffic MilePosts
Date: Fri, 27 Jan 95 07:58:30 EST
Message-Id: <02193.15021591@RAMail>
Version: RAMail 2.8h
Location: UNKNOWN (1840) ,

>Receiving a lazer diode would be far beyond our capability I would
>think. The beauty of a GUNN oscillator is that it is its own LO so just
>DC goes in and audio doppler comes out. Donno how you would get doppler
>info from optical frequencies. Without some very expensive stuff....

I don't know how it's done, but there are a number of kits and plenty of information on how do set up lightwave communications systems with lasers.

Seems if the laser diode is modulated with a signal, then a detector used to receive the reflected signal the two could be compared.

Perhaps the diode could be pulsed at a known rate, then the pulses recovered by a detector, and the frequency of the pulses compared.

It's only advantage over Gunnplexers is the increased selectivity. If aimed right at one lane, you will probably have only one set of signals to work with.

Jack

n4uls@ram.net
From billh@INS.INFONET.NET Sat Jan 28 16:28:03 1995
Return-Path: <billh@INS.INFONET.NET>

Received: from INS.INFONET.NET by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rYLcg-0000UUC; Sat, 28 Jan 95 16:28 CST
Received: by INS.INFONET.NET (MX V4.1 AXP) id 33; Sat, 28 Jan 1995 16:29:33 CST
Date: Sat, 28 Jan 1995 16:29:32 CST
From: "John W. (Bill) Hays, WOOMV" <billh@INS.INFONET.NET>
To: aprssig@tapr.org
Message-ID: <0098B254.CBED7603.33@INS.INFONET.NET>
Subject: How MacAPRS

I hv downloaded the 1.2.6 version of MacAPRS. It has a few more enhancements.
1. How do I use or access the "enable deleted" feature I see it in the menu
as an item but how do I mark or select a station/object to be deleted and at what
interval?

2. How do I "ping" in the Mac version?

73

BTW TNX for the update!

From paul@ke6et.clark.net Sun Jan 29 11:30:27 1995

Return-Path: <ke6et!paul@clark.net>

Received: from clarknet.clark.net by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rYdSD-0000q3C; Sun, 29 Jan 95 11:30 CST

Received: by clarknet.clark.net (5.0/SMI-SVR4)
id AA10982; Sun, 29 Jan 1995 12:32:22 +0500

>Received: by ke6et.clark.net (1.65/waf)
via UUCP; Sun, 29 Jan 95 12:16:14 EST
for aprssig@tapr.org

To: aprssig@tapr.org

Subject: APRS Via FTP

From: paul@ke6et.clark.net (Paul B. Schou)

Message-Id: <cm0oZc1w165w@ke6et.clark.net>

Date: Sun, 29 Jan 95 12:11:47 EST

Organization: Annapolis Regional Network

Content-Type: text

Content-Length: 393

The latest APRSxxxx.ZIP file will be available via anonymous ftp at
ftp.clark.net in the pub/pauls directory.

The ftp service will start o/a Feb 1, 1995 when the ARN BBS changes
software. The latest version will be posted ASAP after Bob gives it
to us.

Hillsmere Shores - Annapolis, MD USA - Sailing Capital of the World
Packet: ke6et@ke6et.md.usa.noam -- COSYSOP ARN BBS (410) 280-2503

From gjones@tenet.edu Sun Jan 29 13:39:47 1995

Return-Path: <gjones@tenet.edu>

Received: from Alice-Thurman.tenet.edu by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rYfTM-0001X0C; Sun, 29 Jan 95 13:39 CST

Received: (from gjones@localhost) by Alice-Thurman.tenet.edu (8.6.9/8.6.9) id
NAA15660 for aprssig@tapr.org; Sun, 29 Jan 1995 13:39:42 -0600

From: Greg Jones <gjones@tenet.edu>

Message-Id: <199501291939.NAA15660@Alice-Thurman.tenet.edu>

Subject: Re: [APRSSIG:121] APRS Via FTP
To: aprssig@tapr.org
Date: Sun, 29 Jan 1995 13:39:42 -0600 (CST)
In-Reply-To: <cm0oZc1w165w@ke6et.clark.net> from "Paul B. Schou" at Jan 29, 95 11:49:00 am
X-Mailer: ELM [version 2.4 PL23]
Content-Type: text
Content-Length: 700

There is a FTP upload area as part of this SIG.....please feel free to upload this type of software to that area....just let Keith know so he can move it around if necessary.

ftp.tapr.org, anonymous login, /tapr/SIG/aprssi

Cheers - Greg, WD5IVD

According to Paul B. Schou:

>
> The latest APRSxxxx.ZIP file will be available via anonymous ftp at
> ftp.clark.net in the pub/pauls directory.
>
> The ftp service will start o/a Feb 1, 1995 when the ARN BBS changes
> software. The latest version will be posted ASAP after Bob gives it
> to us.
>
>
> Hillsmere Shores - Annapolis, MD USA - Sailing Capital of the World
> Packet: ke6et@ke6et.md.usa.noam -- COSYSOP ARN BBS (410) 280-2503
>
>

From jbaum@freenet.columbus.oh.us Sun Jan 29 19:14:47 1995
Return-Path: <jbaum@freenet.columbus.oh.us>
Received: from ronco.freenet.columbus.oh.us by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rYkhw-0000xDC; Sun, 29 Jan 95 19:14 CST
Received: from acme.freenet.columbus.oh.us by ronco.freenet.columbus.oh.us (8.6.9/4.940426) id UAA04801; Sun, 29 Jan 1995 20:12:52 -0500
Received: by acme.freenet.columbus.oh.us (8.6.9) id UAA06882; Sun, 29 Jan 1995 20:14:03 -0500
Date: Sun, 29 Jan 1995 20:02:45 -0500 (EST)
From: John Baum <jbaum@freenet.columbus.oh.us>
Subject: How about some more labels
To: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
cc: aprs sig <aprssig@tapr.org>
Message-ID: <Pine.3.07.9501292045.A5308-d101000@acme>
MIME-Version: 1.0
Content-Type: MULTIPART/MIXED; BOUNDARY="1915860659-1564142609-791428443:#5308"

--1915860659-1564142609-791428443:#5308
Content-Type: TEXT/PLAIN; charset=US-ASCII

Downloaded APRSBETA from ARN BBS and running it on main system with the ULII on Comm 2 - no problems so far.

I am trying something different with the maps I am making for the folks up in MI. I'm using the small square symbol to show the location of smaller towns at the 16 mi range, then putting the name in at 8 mi. I figure this beat using a ton of points trying to draw the outline of the towns off of outdated maps.

This leads to the problem where I might be running out of "labels" on maps with a lot of small towns. Would it be possible to pump up the number of labels allowable in some future version ?

BTW - I'll be taking the Thursday before Dayton off to track everyone coming thru town. Stop by if ya get a chance and I'll buy ya a cup of coffee.

OHMAPS02.Zip is available for DL from both ARN BBS and APRS OHIO BBS if you haven't gotten a copy so far.

73 - John

The Ohio Mapmaker - KB8JX0 - Sysop APRS OHIO LLBBS (614) 443-4249
Packet address KB8JX0@W8CQK.#CMH.OH.USA
The 137th most knowledgeable person about A.P.R.S.

--1915860659-1564142609-791428443:#5308

Content-Type: APPLICATION/octet-stream; name="lanq.map"

Content-ID: <Pine.3.07.9501292002.A5308@acme>

Content-Description: Lansing Mi Map

43 ,LATITUDE LANSING 30 X 60 QUAD by KB8JX0@W8CMH,#CMH,OH,USA 1/21/95
85 ,Long
500 ,PIXELS PER DEGREE
42.75 , LATITUDE CENTER
84.5 , LONGITUDE CENTER
16 ,MAP RANGE
.5 ,MIN RANGE
Lansing Mi
0,0
6 , INGHAM COUNTY
198,250
198,115
318,115
318,112
421,112
429,250
0,0
6 , LIVINGSTON COUNTY
421,112
500,111
0,0
6 , SHIAWASSEE COUNTY
318,112
317,1
0,0
6 , CLINTON COUNTY
198,115

81,115
81,1
0,0
6 ,EATON COUNTY
81,115
1,114
0,0
10 , I-96
1,61
10,61
18,63
27,67
32,67
44,70
47,69
63,71
76,78
80,86
134,101
153,101
157,102
164,107
166,120
165,140
165,151
167,158
174,162
181,167
202,167
227,171
245,166
256,161
285,161
313,163
325,166
335,167
393,167
408,173
444,174
450,177
474,177
485,181
498,188
500,189
0,0
10 , I-69 W
70,250
72,248
75,246
87,239
89,235
89,214
91,212

174,162
0,0
10 , I-69T
246,138
245,137
245,130
248,130
256,127
265,127
277,124
281,118
295,112
304,111
313,102
363,93
369,87
400,80
420,69
433,65
449,55
477,44
487,40
500,37
0,0
10 , I-496
165,140
190,140
204,138
207,137
230,137
234,136
240,138
246,138
248,149
249,151
249,157
252,162
0,0
12 , US 127 S
252,162
254,164
260,166
263,167
263,170
260,180
263,183
262,192
268,203
271,212
278,219
278,250
0,0
12 , US 127 N

245,130
246,127
246,122
243,114
243,97
236,92
211,92
206,96
200,96
167,96
157,102
0,0
12 , US 27
227,137
226,133
226,126
227,124
228,120
229,7
228,5
225,2
225,-1
0,0
12 , US 27 W
174,162
180,156
183,153
201,140
206,138
207,137
0,0
12 , US 27 DT
227,137
227,124
0,0
14 , CCA 1
200,111
212,111
0,0
14 , CCA 2
200,114
206,109
0,0
14 , CCA 3
205,109
209,113
0,0
14 , CCA 4
207,108
214,108
0,0
4 , MI 21
319,-1

322,1
380,1
390,2
417,2
500,1
0,0
4 , MI 21
40,-1
42,1
50,-1
0,0
4 , MI 21
64,-1
69,3
77,3
81,-1
0,0
4 , MI 143
226,133
254,133
258,132
0,0
4 , MI 43
-1,122
113,122
116,123
121,129
125,130
207,129
209,130
210,129
212,128
244,128
276,137
289,139
296,141
319,146
349,156
355,156
359,155
390,162
0,0
4 , MI 43 DT
209,130
245,130
0,0
4 , MI UNK DT
164,107
196,114
200,115
212,120
224,124
227,124

0,0
4 , MI 100
130,100
130,121
127,123
130,126
130,188
0,0
4 , MI 79
-1,216
70,215
75,217
82,217
0,0
4 , MI 50
-1,137
4,140
6,143
74,191
82,217
83,223
120,223
140,233
145,235
152,237
155,238
172,242
172,250
0,0
4 , MI 188
172,246
176,250
0,0
4 , MI 99
172,242
172,240
180,235
189,222
188,180
190,178
203,169
216,159
216,137
0,0
4 , MI 36
227,137
227,140
226,144
226,161
230,170
238,176
246,183
252,192

274,207
274,210
280,210
288,212
305,213
310,214
315,222
380,222
385,224
404,224
405,244
420,245
430,249
434,249
435,250
0,0
4 , MI UNK 2
359,155
360,199
350,199
350,217
348,219
348,222
0,0
4 , MI 52
412,-1
412,9
395,22
390,30
390,65
391,92
387,97
390,162
392,163
396,164
401,165
404,224
405,244
405,250
0,0
4 , MI 71
414,2
415,3
415,4
438,8
441,8
441,11
450,11
479,26
489,28
498,35
500,37
0,-1

0,
LANSING,42.69879,84.5192,16
CHARLOTTE,42.5596,84.80236,16
\$'f,42.574,84.81195,8
\$Z6,42.76364,84.89117,16
MULLIKEN,42.76364,84.89117,8
\$Z6,42.76044,84.99026,16
SUNFIELD,42.76044,84.99026,8
PORTLAND,42.86525,84.88398,16
\$Z6,42.98283,84.9416,16
LYONS,42.98283,84.9416,8
\$Z6,42.93084,84.80061,16
WESTPHALIA,42.93084,84.80061,8
\$Z6,42.80922,84.78939,16
EAGLE,42.80922,84.78939,8
GRAND LODGE,42.74838,84.71181,16
\$'f,42.77641,84.73524,16
ABRAM'S MUN,42.77801,84.73444,8
POTTERSVILLE,42.62358,84.70724,16
\$Z6,42.64599,84.6497,16
DIMONDALE,42.64599,84.6497,8
EATON RAPIDS,42.50676,84.63051,16
ST JOHNS,42.99004,84.52162,16
\$Z6,42.84282,84.56957,16
DeWITT,42.84282,84.56957,8
\$'f,42.77681,84.48524,16
\$Z6,42.75323,84.40994,16
HASLETT,42.75323,84.40994,8
OKEMOS,42.71568,84.39079,16
HOLT,42.6405,84.49628,16
\$K6,42.7292,84.48638,8
M.S.U.,42.7292,84.48638,4
MASON,42.58517,84.43198,16
\$Z6,42.82359,84.2177,16
PERRY,42.82359,84.20969,8
\$Z6,42.68996,84.2817,16
WILLIAMS TOWN,42.69239,84.25677,8
\$Z6,42.55597,84.30396,16
DANSVILLE,42.55117,84.28634,8
OWOSSO,42.99279,84.16151,16
\$'f,42.99279,84.13908,16
\$Z6,42.97838,84.11669,16
CORUNNA,42.97998,84.10708,8
\$Z6,42.94003,84.03017,16
VERNON,42.94482,84.02377,8
\$Z6,42.87601,84.06372,16
BANCROFT,42.87601,84.05731,8
\$Z6,42.8376,84.17559,16
MORRICE,42.8376,84.16918,8
\$Z6,42.66637,84.17399,16
WEBBERVILLE,42.66637,84.16998,8
\$Z6,42.66077,84.07088,16
FOWLERVILLE,42.66077,84.0517,8

\$'f,42.71838,84.0581,16
MAPLE GROVE AIR,42.71838,84.04851,8
DAVIS AIRPORT,42.7756,84.45853,8
CAP CITY AIRPORT,42.7884,84.55763,8
I-96,42.6652,84.39799,16
I-96,42.844,84.8288,16
I-69,42.60076,84.74558,16
I-69,42.80121,84.28876,16
US 27,42.88442,84.5192,16
US 127,42.53247,84.42319,16
MI 43,42.74683,84.84249,8
MI 50,42.65401,84.88089,8
MI 79,42.5612,84.89687,8
MI 50,42.53239,84.69548,8
MI 99,42.54839,84.60917,8
MI 100,42.69881,84.72105,8
I-496,42.71642,84.62843,4
US 27,42.69405,84.62521,8
MI 99,42.69405,84.56112,8
MI 36,42.71163,84.53867,8
MI 43,42.7388,84.61383,8
MI 43,42.7276,84.44246,8
MI 36,42.55039,84.22968,8
MI 36,42.608,84.46943,8
MI 52,42.602,84.18172,8
MI 52,42.71722,84.2073,8
MI 43,42.68201,84.22968,8
MI 52,42.94125,84.19762,8
MI 71,42.96685,84.06335,8
MI 21,42.99245,84.26475,8
IONIA CO.,42.80121,84.87126,16
CLINTON CO.,42.87162,84.67283,16
\$Z6,42.89236,84.34957,16
LAINGSBURG,42.89236,84.34957,8
\$K6,42.73402,84.55327,8
STATE CAPITOL,42.73042,84.55167,4
SHIAWASSE CO.,42.78839,84.16714,16
EATON CO.,42.67319,84.78805,16
INGHAM CO.,42.61558,84.33997,16
LIVINGSTON CO.,42.75,84.00712,16
--1915860659-1564142609-791428443:#5308--

From bruninga@greatlakes.nadn.navy.mil Mon Jan 30 08:54:00 1995
Return-Path: <bruninga@greatlakes.nadn.navy.mil>
Received: from greatlakes.nadn.navy.mil by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rYxUL-00002tC; Mon, 30 Jan 95 08:53 CST
Received: by greatlakes.nadn.navy.mil (4.1/SMI-4.1)
id AA19116; Mon, 30 Jan 95 09:53:43 EST
Date: Mon, 30 Jan 1995 09:53:43 -0500 (EST)
From: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
To: aprssig@tapr.org
Subject: Re: [APRSSIG:123] How about some more labels
In-Reply-To: <Pine.3.07.9501292045.A5308-d101000@acme>

Message-Id: <Pine.SUN.3.91.950130095210.18584F-100000@greatlakes.nadn.navy.mil>
Mime-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I notice that you have the U-II. Please let me know ASAP if it is working. Mine is showing a constand direction of 292 degrees and a constant temp of -56 degrees. Maybe I need to reset the U-II and it is NOT a problem with APRS. I cant find a bug in APRS and I didnt make any changes there, but mine is NOT working with APRSBETA....

From paul@ke6et.clark.net Mon Jan 30 11:58:21 1995
Return-Path: <ke6et!paul@clark.net>
Received: from clarknet.clark.net by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rZ0Ml-0000UeC; Mon, 30 Jan 95 11:58 CST
Received: by clarknet.clark.net (5.0/SMI-SVR4) id AA26675; Mon, 30 Jan 1995 13:00:17 +0500
>Received: by ke6et.clark.net (rnr) via rnr; Sun, 29 Jan 1995 16:02:26 EDT
Path: ke6et!paul
Newsgroups: mail.list.tapr.aprs
X-Original-Article-From: Greg Jones <gjones@tenet.edu>
From: paul@ke6et.clark.net (Paul B. Schou)
Subject: Re: [APRSSIG:122] Re: APRS Via FTP
Message-Id: <950129.155606.5S0.rnr.w165w@ke6et.clark.net>
Date: Sun, 29 Jan 1995 15:56:06 EDT
References: <199501291939.NAA15660@Alice-Thurman.tenet.edu>
Organization: Annapolis Regional Network
X-Newsreader: rnr v1.23
To: aprssig@tapr.org
Content-Type: text
Content-Length: 579

aprssig@tapr.org writes:

> There is a FTP upload area as part of this SIG.....please feel free to
> upload this type of software to that area....just let Keith know so he can
> move it around if necessary.

>

> ftp.tapr.org, anonymous login, /tapr/SIG/aprssi

>

The ARN BBS has been the principal distributor for APRS software since Bob started writing it. I don't mind at all putting it up on TAPR also whenever Bob releases an update.

--

Hillsmere Shores - Annapolis, MD USA - Sailing Capital of the World
Packet: ke6et@ke6et.md.usa.noam -- COSYSOP ARN BBS (410) 280-2503

From paul@ke6et.clark.net Mon Jan 30 11:58:30 1995
Return-Path: <ke6et!paul@clark.net>
Received: from clarknet.clark.net by dptspd.sat.datapoint.com with smtp (Smail3.1.29.1 #5) id m0rZ0Mu-0000UeC; Mon, 30 Jan 95 11:58 CST
Received: by clarknet.clark.net (5.0/SMI-SVR4) id AA26725; Mon, 30 Jan 1995 13:00:25 +0500

>Received: by ke6et.clark.net (rnr)
via rnr; Mon, 30 Jan 1995 12:53:11 EDT
Path: ke6et!paul
Newsgroups: mail.list.tapr.aprs
X-Original-Article-From: Greg Jones <gjones@tenet.edu>
From: paul@ke6et.clark.net (Paul B. Schou)
Subject: Re: [APRSSIG:122] Re: APRS Via FTP
Message-Id: <950130.125040.6D2.rnr.w165w@ke6et.clark.net>
Date: Mon, 30 Jan 1995 12:50:40 EDT
References: <199501291939.NAA15660@Alice-Thurman.tenet.edu>
Organization: Annapolis Regional Network
X-Newsreader: rnr v1.23
To: aprssig@tapr.org
Content-Type: text
Content-Length: 465

aprssig@tapr.org writes:

> There is a FTP upload area as part of this SIG.....please feel free to
> upload this type of software to that area....just let Keith know so he can
> move it around if necessary.
>
> ftp.tapr.org, anonymous login, /tapr/SIG/aprssi
>
> Cheers - Greg, WD5IVD
>

Sure will, starting Feb 1 or 2.

--

Hillsmere Shores - Annapolis, MD USA - Sailing Capital of the World
Packet: ke6et@ke6et.md.usa.noam -- COSYSOP ARN BBS (410) 280-2503

From jbaum@freenet.columbus.oh.us Mon Jan 30 19:58:53 1995
Return-Path: <jbaum@freenet.columbus.oh.us>
Received: from ronco.freenet.columbus.oh.us by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rZ7r1-0000iwC; Mon, 30 Jan 95 19:58 CST
Received: from acme.freenet.columbus.oh.us by ronco.freenet.columbus.oh.us
(8.6.9/4.940426)
id UAA18640; Mon, 30 Jan 1995 20:56:58 -0500
Received: by acme.freenet.columbus.oh.us (8.6.9) id UAA00500; Mon, 30 Jan 1995
20:58:14 -0500
Date: Mon, 30 Jan 1995 20:50:08 -0500 (EST)
From: John Baum <jbaum@freenet.columbus.oh.us>
Subject: Re: [APRSSIG:124] Re: How about some more labels
To: Robert Bruninga <bruninga@greatlakes.nadn.navy.mil>
cc: aprssig@tapr.org
In-Reply-To: <Pine.SUN.3.91.950130095210.18584F-100000@greatlakes.nadn.navy.mil>
Message-ID: <Pine.3.07.9501302006.A29409-a100000@acme>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Yes I am using the ULII and it is working fine with APRSBETA. It
is updating and beaconing out properly. I have not yet put Beta on the

8088 laptop with the LCD CGA screen. (That's why I use few points on my maps.)

I did get one crash when it was doing a screen redraw yesterday.

The following represents the screen at the time of crash:

LM,PM: 10 12

a,I,J,K,fdx,LDx: 0 48 1 73 0 0

X,Y,X1,Y1 134.6432 348.6307 -229.1724 -269.9749

A\$ Q

c\$

ES\$in loop

000PP! ERR number 5 Hit ENTER to return to DOS?

I was in VGA Mode at the time.

I hope this helps.

The Ohio Mapmaker - KB8JX0 - Sysop APRS OHIO LLBBS (614) 443-4249

Packet address KB8JX0@W8CQK.#CMH.OH.USA

The 137th most knowledgeable person about A.P.R.S.

From akasbb1@peabody.sct.ucarb.com Tue Jan 31 12:45:36 1995

Return-Path: <akasbb1@peabody.sct.ucarb.com>

Received: from peabody.sct.ucarb.com by dptspd.sat.datapoint.com with smtp

(Smail3.1.29.1 #5) id m0rZNa0-0000bZC; Tue, 31 Jan 95 12:45 CST

Received: from [140.170.164.187] by peabody.sct.ucarb.com (AIX 3.2/UCB 5.64/4.03)

id AA05859; Tue, 31 Jan 1995 13:42:02 -0500

Message-Id: <9501311842.AA05859@peabody.sct.ucarb.com>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Tue, 31 Jan 1995 13:44:34 -0500

To: aprssig@tapr.org, ablock@nubis.rutgers.edu, dalpert@merle.acns.nwu.edu,
daxenos@bu.edu, "David P. Worrall" <70214.2530@CompuServe.COM>,
Emmet2@aol.com, heyu@aol.com, jan@archimedes.chinalake.navy.mil,
kb2ear@kb2ear.overleaf.com, rbarris@quicksilver.com,
sdimse@umbio.med.miami.edu (Steven S. Dimse), skou@inel.gov,
thayes@hardees.rutgers.edu, tstader@aol.com, wolft@dbisna.com,
wpmichel@srp.gov, ka6eyh@muncey.com, wannamaker@macnet.vpharm.com,
kc6rol@amsat.org, 72170.30@compuserve.com, delta2@infi.net,
castonj@ireq.hydro.qc.ca, lipson@ctobbs.com, rewing@mitre.org,
DwainM7367@aol.com, "Joe Moell" <joemoell@cup.portal.com>,
gpotter@collabra.com, 74736.3171@compuserve.com,
Richard H Inacker <inacker@pogo.den.mmc.com>, Sam_Lipson@Berlex.Com,
GregNel123@aol.com, ken@spacetime.mv.com,
philkeys@olympus.net (Phil Keys), Dick Mead <mead@ucs.usc.edu>,
rtm@Newton.apple.com (Bob Martin), DrewT@aol.com, KE4GNN@aol.com,
maryniak@ocean.rutgers.edu, cikedah@hinc.hawaii.gov,
Sam_Lipson@Berlex.Com, smarks@nr.infi.net

From: akasbb1@peabody.sct.ucarb.com (Keith Sproul)

Subject: Wheaton Hamfest APRS Conference

APRS Meetings at Wheaton Hamfest Chicago, IL
Jan 29, 1995

The Wheaton Hamfest sponsored an APRS/Balloon/Skywarn series of presentations this past weekend. This Hamfest was in Villa Park, ILL a northern suburb of Chicago close to O'Hair airport.

Among the people giving these presentations where:

KA9NHL, David Chesser
N9LCI, Ed Rodgers
N9LTD, David Mullenix
WU2Z, Keith Sproul

The topics presented where:

- * Introduction to APRS (N9LCI)
- * APRS and Skywarn/Weather (WU2Z)
- * APRS and Ballooning (N9LTD & WU2Z)

Although we had somewhat of a small room, we had lots of interest and Standing-Room-Only for most of the day.

During the Skywarn/Weather discussions, we had a lot of good input from weather people, discussing weather alarms and automated ways to get weather information. I also had some good discussions off-line with some Skywarn people about what types of information they wanted and when. As a result of these discussions, I have now implemented the Weather Alarm capabilities in the Macintosh version of APRS (Version 1.3.0 which should be out later this week).

David Mullenix (N9LTD) gave a very good presentation about Ballooning in general. This was followed by computer play-backs of the GPS data from three of the balloon flights that they had done this past summer.

=====
PACCOMM INTRODUCES THE PICO PACKET.

(Note: This is being done from memory and may not be exact)

Paccomm introduced the newest and tiniest TNC! This is a little black box smaller than a pack of cigarettes, that has several different options. In its normal configuration, it will be about the same price as the Tiny-2, and it will have several add-on options.

Add On Options:

- * Second Serial Port for hooking up a GPS receiver!!!!!!
- * More Memory (up to a meg or so) for mail-box type operations

This unit is VERY HOT, and should be available by Dayton!!

(IMHO) THIS THING IS AN APRS PERSONS DREAM COME TRUE!!!!

Keith Sproul	Amateur Radio: WU2Z
698 Magnolia Road	Internet: akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647	Packet Radio: wu2z@kb2ear.nj.usa
Work: 908 563-5389	AppleLink: Sproul.K
Fax: 908 563-5035	Chairman ACG-NJ Mac Users Group
Home: 908 821-4828	Author of MacAPRS

From sfp@wk0c01g3.abrfc.noaa.gov Tue Jan 31 14:00:32 1995
Return-Path: <sfp@wk0c01g3.abrfc.noaa.gov>
Received: from wk0c01g3.abrfc.noaa.gov by dptspd.sat.datapoint.com with smtp
(Smail3.1.29.1 #5) id m0rZ0kY-0000azC; Tue, 31 Jan 95 14:00 CST
Message-Id: <m0rZ0kY-0000azC@dptspd.sat.datapoint.com>
Received: by wk0c01g3.abrfc.noaa.gov
(1.37.109.4/16.2) id AA27337; Tue, 31 Jan 95 13:59:35 -0600
From: Steve Piltz <sfp@wk0c01g3.abrfc.noaa.gov>
Subject: Re: [APRSSIG:128]
To: aprssig@tapr.org
Date: Tue, 31 Jan 95 13:59:34 CST
Full-Name: Steve Piltz
In-Reply-To: <9501311842.AA05859@peabody.sct.ucarb.com>; from "Keith Sproul" at
Jan 31, 95 12:49 (noon)
Mailer: Elm [revision: 70.85]

Keith,

I have briefly taken a look at APRS63.B, and can imagine several SKYWARN applications. I have given the software to 2 emergency management directors in the area.

Here at Tulsa, we have a TEXNET node in the NWS office that is automatically fed SKYWARN information, including an ASCII file that can be used to construct a radar image. The system works great, but lacks the ability to autoforward the warning messages from the server. If this could be done, then everyone in the area on the frequency could receive the warning at once, which would be a great service to the area civil defense agencies.

Any thoughts on how APRS could handle being automatically fed data, and then rebroadcasting it to all?

--

from: Steve Piltz KA9MLL
Warning Coordination Meteorologist

National Weather Service
10159 East 11th St., Suite 300
Tulsa, Oklahoma 74128-3050
sfp@awips5.abrfc.noaa.gov